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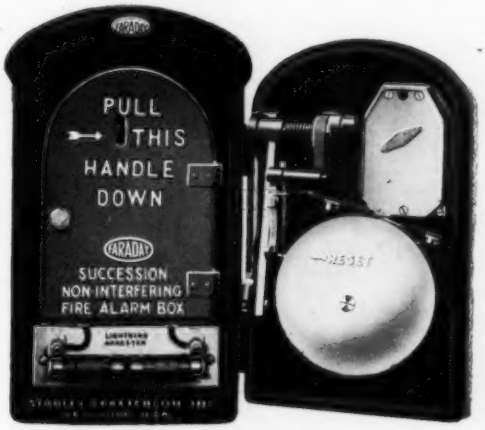

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Published Every Other Wednesday

SUBSCRIPTION PRICE
U. S. $3 a year; Canada $3.50
Foreign $4; Single Copies, 25c.

Issued at Lyon Block, Albany, N. Y.
by CASE-SHEPPERD-MANN PUBLISHING CORP.
Also publishers of "Water Works Engineering," Technical Books, etc.

Executive, Editorial, Advertising and Subscription Office
225 West 34th Street, New York City
All communications, including Editorial, Advertising and Subscription can be directed to either of the above addresses.

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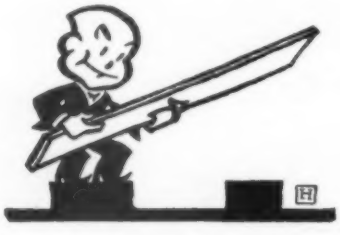

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The Publishers

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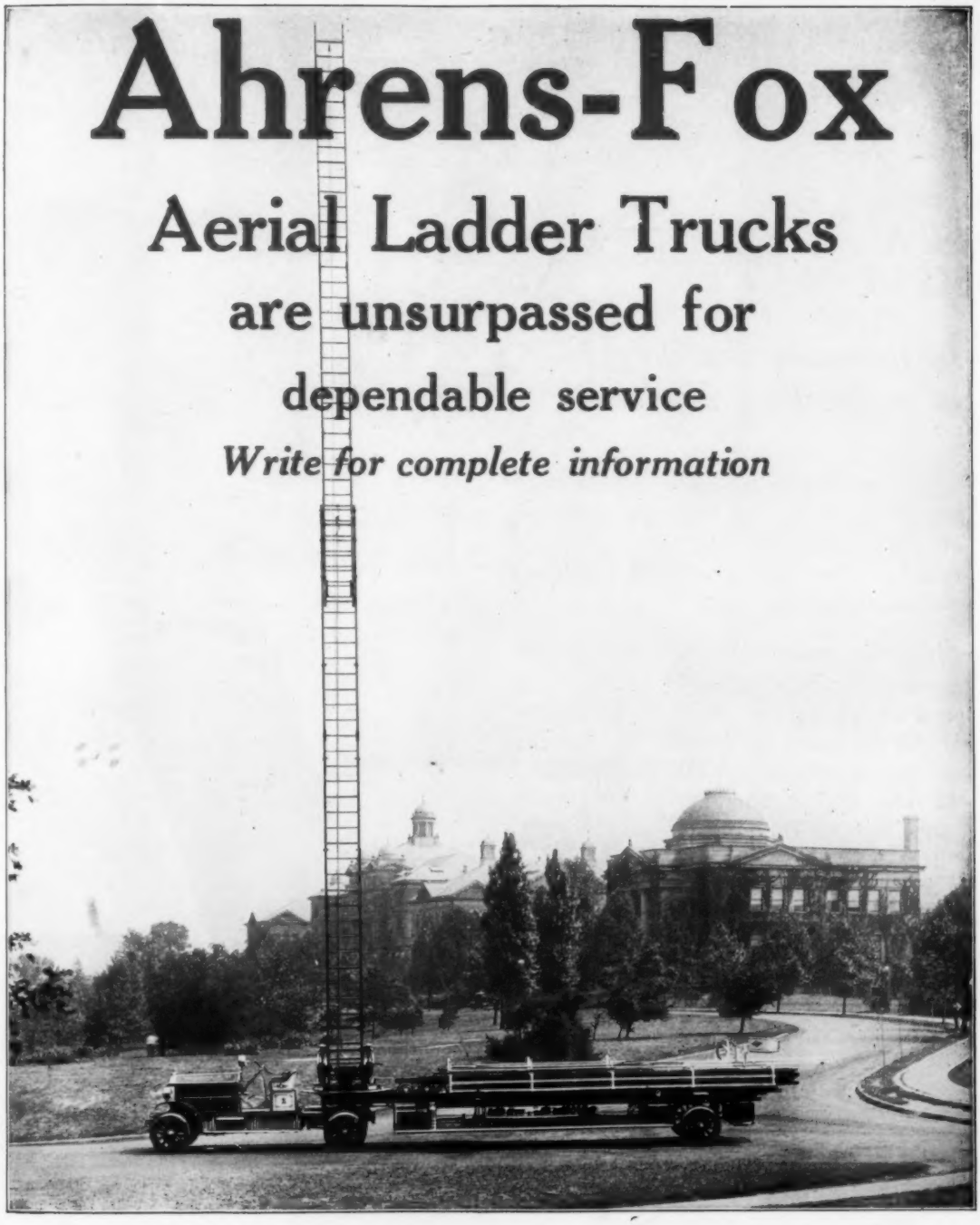

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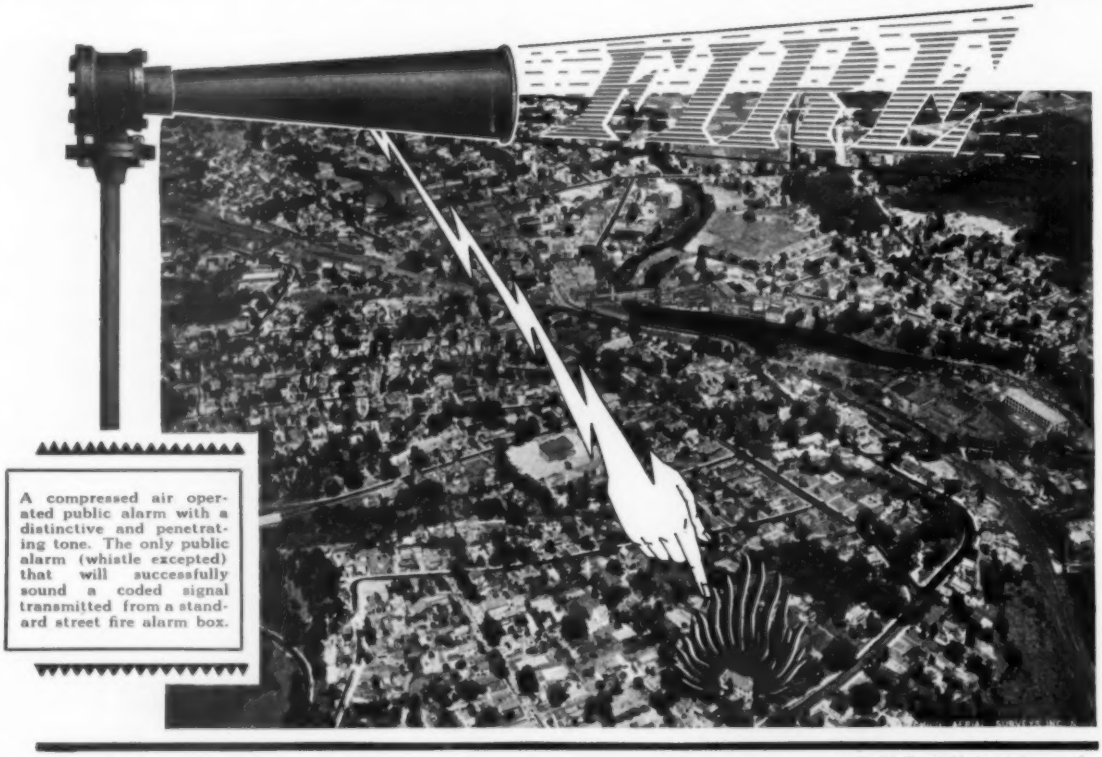

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The Journal of the Fire Protection Profession

VOLUME LXXXI AUGUST 22, 1928 NUMBER 17

Who is Liable for Property Loss?

Custodian of Merchandise Must Exercise Reasonable Care to Protect Goods from Fire Damage—Abstract of Court Decisions on Subject

By LEO T. PARKER, Attorney-at-Law, Cincinnati

MANY times the problem arises of who is to be held liable for goods destroyed while stored in a warehouse or kept for others. Is the warehouse man liable or does the owner of the merchandise assume the fire risk when he places his property in the hands of others?

A number of interesting cases have been decided that will govern the action of what the law terms a bailee. Such a person is one who expressly or impliedly agrees to safeguard another's property.

For example, a merchant, who purchases goods on a conditional sale contract by the terms of which the title thereto remains in the seller until the goods are fully paid for, legally is a bailee. He is bound to exercise ordinary care to preserve the property.

In a very recent case (17 F. (2nd) 413), a higher Court explained the meaning of the term "bailment," as follows:

"It is well settled that a bailment merely transfers the *possession* of the property, the absolute title of which is retained by the owner, who has the right to dispose of the same as he may see fit. . . . It is an essential element of a bailment that the entire title is reserved to the bailor (owner). The fact that the title does not accompany possession is an essential characteristic of bailments, distinguishing them from sales."

Another common class of companies which are legally responsible for the loss of goods through negligence, as a bailee, are common carriers, or railroad companies, particularly, when the shipped merchandise reaches its destination and the consignee fails to call for his property upon expiration of a reasonable time after receiving notification that the property is ready for delivery.

Also, a warehouseman who stores and distributes saleable merchandise for manufacturers is a bailee. Moreover, all other warehousemen who simply store goods, as household furniture, cotton, wheat, and the like products, legally are bailees.

All these various classes of bailees are liable for the loss of property in their care, where such loss results from its lack of ordinary care. Obviously, want of ordinary care is failure to supply adequate fire preventative appliances.

Duties of Bailee

In a very recent case, in explaining the duties of a paid bailee to safeguard property, the Court said:

"A bailee is *not* liable as an insurer of the goods unless he makes himself so by the terms of his contract nor for loss of or injury to the goods due to an act of God or of the public enemy, nor for losses due to inherent defects in the goods or other cases not due to negligence on his part. He is, however, required to exercise ordinary care in the custody of the goods, by which is meant that degree of care which ordinarily prudent persons are accustomed to exercise in regard to similar goods under like circumstances."

Therefore, it is quite apparent that in many instances bailees may materially reduce their chances of liability for loss by fire of other person's property by installing modern automatic fire preventative equipment.

However, a review of a leading case in which a higher Court clearly approved the use of sprinkler systems, will impart the desired information better than mere explanation.

Probably the most important recent case involving this

> "THE Rule is well settled that a warehouseman is not an insurer of the property in his custody against fire but is responsible for loss or injury from this cause only in case of failure to exercise ordinary care to prevent damage or destruction of the property in storage. The duty, as to the exercise of ordinary care, extends, not only, to the means employed to prevent a fire, but to means employed to arrest its progress."

subject is Tubbs v. American Transfer & Storage Co., 297 S. W. 670.

In this case it was disclosed that the American Transfer & Storage Company conducted a warehouse in the city of Dallas for the purpose of storing goods, wares, and merchandise for others. A customer stored in the warehouse his household and kitchen furniture and some family wearing apparel, and received a usual receipt therefor. Later the warehouse burned and the goods were destroyed.

Warehouse Testimony

The testimony disclosed that the warehouse was a large, one-story building, its outer walls of brick, and its dimensions 50 by 160 feet. It was divided into compartments, but was not a fireproof building. The building was located in the vicinity of railroad switching tracks, where railroad engines were frequently operated. The fire occurred between three and four o'clock on a Sunday morning. There was no night watchman, nor any one else regularly kept in the building at night, and no one was there on the occasion of the fire. An employe of the warehouseman would lock it up at about eight o'clock in the evening, look over the premises, and then go to his home across the street from the warehouse, and usually retire for the night. There were no automatic sprinklers installed in the warehouse. Fire-fighting appliances consisted of eight hand extinguishers, designed to extinguish fires by the use of chemicals. Two policemen regularly walked the beat in which the warehouse was situated.

Opinion of Court

The lower Court held the warehouseman not liable for the loss, but the higher Court reversed this verdict, and explained in great detail the duties of a warehouseman, or other bailees, to safeguard against injury and damage to stored goods, in part, saying:

"The rule is well settled by these cases that a warehouseman is not an insurer of the property in his custody against fire, but is responsible for loss or injury from this cause only in case of failure on his part to exercise ordinary care to prevent damage to, or destruction of, the property in storage from such cause. This duty, as to the exercise of ordinary care, extends, *not only to the means employed to prevent a fire*, but also to means employed to arrest its progress after its origin. It is an admitted fact in this case that whatever damage was occasioned appellant (customer) was due to a fire that virtually consumed the warehouse and its contents. The burden of proof rested on appellant (customer) to show that the damage he suffered was the proximate result of a failure of the appellee to exercise ordinary care to prevent such destruction of the property in its custody. There is no evidence that the fire originated through any negligence on the part of the appellee (warehouseman) or its employes. . . . What precaution was taken? There were eight pyrenes, of varying size, which are intended to extinguish and arrest the progress of fires by the means of the use of chemicals. These could only be operated by hand. No one was placed in the building at night to make use of these appliances, and they constituted no precaution against fire by night. Automatic sprinklers are brought into operation by the generation of heat from a fire, and do not require the presence of any one for their operation. They do not tend, of course, to prevent the origin of a fire; but the evidence is undisputed that they have established their value in arresting the progress of a fire. If a night watchman had been in the building, he could have operated the pyrenes, the use of which is to extinguish a fire. *If automatic sprinklers, the use of which is both to extinguish a fire and to hold it within a narrow limit, had been installed, this fire might have been arrested and held within a narrow limit.*"

Another case of great importance, decided during the past few weeks, is Exporters' & Traders' Compress & Warehouse Co. v. Hemphill, 292 S. W. 599. Here the higher Court explained the degree of care required of a warehouseman to provide adequate facilities to extinguish a fire, notwithstanding issuance of a receipt by which he sought to decrease his liability.

The facts of the case are that a warehouseman accepted goods for storage and issued to the owner the following receipt:

"Received of S. R. Hemphill one bale of cotton for storage and compression, and hereby bind ourselves to redeliver it to the legal holder of this receipt or pay the cash market value thereof, acts of Providence, fire and damage excepted."

During the nightime the watchman on duty discovered a fire, and immediately turned in the alarm. He ran back to the warehouse intending to use the hose provided by the warehouseman.

A witness testified as follows:

"As soon as I reached the platform I saw the watchman near the fire, and went immediately to him, holding the hose, trying to put water on the fire. I discovered that water was coming out of the side of the hose through a hole a short ways back from the end. . . . I said to the watchman, 'give me the nozzle and you fix the hole in the hose.' I took the nozzle, and tried to throw the water on the fire. It had no force, and the water just barely reached the place of the fire, but didn't carry any force on account of the hole which was in the hose through which the water was escaping. . . . The watchman tried to stop the hole in the hose, but was unable to do so. . . . The hose of which I have spoken was an old hose; it was not sound; and I would say not in usable condition for an occasion like that. If the hole had not been in the hose so that all the water could have been forced through the nozzle, I could have put out the fire when I got there. If the hose had been long enough so that I could have gotten up to the fire while it was small, I believe I could have put the fire out anyway."

The warehouseman contended that he was not liable because the receipt relieved him of liability for loss of stored goods occasioned by fire. Also, he contended that he had exercised ordinary care in supplying a hose for use to extinguish the fire.

However, the Court held the warehouseman liable for the value of the destroyed goods, irrespective of the provisions of the receipt in view of the inadequate fire equipment, saying:

"The issues of negligence and proximate cause with reference to the length of the hose and with reference to the soundness of the material composing the same are so intimately related that they must necessarily be considered together. . . . We cannot agree . . . that the evidence shows with such certainty that the watchman and Allen could not and would not have extinguished the fire if the hose had been of good quality and sufficient length.

Michigan Firemen Win Compensation Fight

The Board of Review of Michigan has decided that death of a fireman while fighting a fire should not be classed as an occupational disease but as an accident. This decision makes it possible for the dependents of such a fireman to collect according to the workmen's compensation act.

The Board's decision was in the case of Eugene Parker of the Saginaw fire department. On April 27, 1927, Parker was overcome by smoke while fighting a fire in an old dwelling house. He died at the station an hour later. His dependents were a widow and four children under sixteen years of age. His wages were $32.50 a week and so, if the fact was established that his death was accidental, his dependents were entitled to compensation from the city of $14 a week for 300 weeks or a total of $4,200.

Butte, Mont., Improves Fire Alarm—About $3,000 is to be spent to improve the fire alarm system of Butte, Mont.

Sharon, Pa., to Standardize Couplings—The couplings of all hose in Sharon, Pa., Fire Department, are to be converted to the standard type.

Giving the Chief Power in Fire Prevention

Should Formulate and Have Power to Enforce General Fire Prevention Regulations—Office Should Be Non-Political

By EX-CHIEF PETER E. WALSH, Boston, Mass.*

THE remedy for looseness in matters of fire prevention and protection, according to Chief Walsh's ideas lies in giving the chief the power both to formulate and enforce regulations governing these important matters. His ideas are interesting:

Ex-Chief Peter E. Walsh

I have never regretted my selection of the Fire Department as my life's work. From the day I joined the Boston Fire Department 36 years ago I entered upon the work with interest stimulated by a desire to do something in the service. This ambition grew upon me and the longer I remained in the department the more I seemed impressed with the terrible tragedy of fire. Before fire prevention was brought to the front I had given considerable study to the problems of Boston, and theorized on the thought that fire was man's enemy and what a wonderful thing it would be if it could be regulated. I do not take any credit to myself—fire prevention became a sort of complex with me. They say everyone has some kind of a "complex," and if that is so the hatred of fire became my "complex." It was not a hatred born of fear, but a hatred for the crime that it was, leaving nothing but havoc and sorrow in its wake.

I felt that the best agency to fight fire was in the fire department, and there I remained to fight with the men and machinery provided, and, whenever possible to advance my belief that proper regulation would effect some sort of control over it. It was because of my desire to give the best I could that I consented to be recalled for service in the Boston Fire Department in 1926 for the purpose of reorganizing the Fire Prevention Division. My recall meant some sacrifice to me, but I was willing because the desire to accomplish something was still a predominant passion with me.

I have made this introduction as a sort of explanation, because I must dwell chiefly on my experience in Boston. Notwithstanding my experience, I believe the topic which has been presented to me to discuss is an extremely difficult one. My experience has not been with "Organized Fire Prevention" but more so with an attempt to organize fire prevention.

No Organized Fire Prevention in New England

From what knowledge I have of the situation in New England there is no such thing as "Organized Fire Prevention." There are laws upon our statute books which place specific restrictions on certain things, but the authority to enforce these laws, unfortunately, is vested elsewhere than in the fire department officials. The chief of a fire department in New England can look the laws over, study them, and then it is up to him to do the best that he can. In many cases the authority to exercise any power is delegated, and after looking at the law he must refer to his delegation of power with a "Have I" or "Haven't I the power" attitude, with the result that he must get an opinion from a learned attorney as to the intent of the law and the extent of the delegated authority.

Placing Chief on Non-Political Basis

I am not speaking lightly of the situation. It is a serious condition and I have stated it just as it exists. Something must be done to correct the dilemma we are in if we hope to have organized fire prevention. It is my firm belief that the fire department of every municipality should be self contained and the chief of the fire department should be given the statutory authority to enforce fire prevention regulations in his own jurisdiction. In this the problem finds a solution, for, the matter then becomes a question of home rule and an obligation for the individual fire chief. To place fire prevention on an organized basis, therefore, I submit the following:

The political appointment of fire chiefs should be absolutely abolished, and every chief from the smallest town to the greatest metropolitan city should be placed under civil service or tenure of office protection. This is the first step to make in the effective administration of a fire department, whether it be for fire prevention

* From a paper read before the annual convention of the New England Association of Fire Chiefs at Burlington, Vt.

"THE Fire Department of every municipality should be self-contained and the Chief should be given the statutory authority to enforce fire prevention regulations in his own jurisdiction. The matter then becomes a question of home rule and an obligation for the individual fire chief."

purposes or as a matter of general efficiency. Having placed the chief in a position of security, subject to the usual penalties for inefficiency, it is for him to decide the policies of the department, and he is not obliged to seek protection by "being all things to all men." If a chief is not protected in this way organized fire prevention will not be successful, for the first essential in everything is an organization with a fixed head.

Power to Establish and Enforce Regulations

Following this, statutes should be enacted to empower a chief to establish regulations governing the general hazards encountered in his line of work, and investing him with power to enforce these regulations subject to only one appeal,—the courts.

Boston Fire Prevention Bureau

The history of fire prevention in Boston is short, but nevertheless significant of what may be done in any community. In 1919 the Boston Fire Department established a branch known as the fire prevention bureau, which comprised a Lieutenant and fifteen inspectors whose duties were to inspect buildings, structures and premises for the purpose of detecting and remedying conditions likely to cause fire. There being fifteen districts in the city, one man was assigned to each district and the lieutenant in charge kept them actively engaged in their duties from 9 a. m. to 5 p. m., this being the only duty they were required to perform.

This branch also included a force of clerks who issued all classes of permits, license renewals, etc., required by law and regulation. It was hoped from this small force that Boston would eventually develop a fire prevention division comparable to other large cities. But the importance of this branch of the service was apparently not sufficiently realized, as no special improvement was noticeable for a number of years until in 1926 the present fire commissioner realizing that the old adage "An ounce of prevention is worth a pound of cure" would be as efficacious in the diminishing of fire losses as it would be in the reduction of diseases, etc., determined to strengthen this division.

Acting under a law established in 1920 he recalled the writer into the department, after a four years sojourn, to take charge temporarily of the newly reorganized fire prevention division. During the 17 months that I had charge I had a force averaging 25 inspectors under the direction of a well trained Captain, which was continuously inspecting mercantile and manufacturing buildings, hotels, apartment houses, garages, storage warehouses and all other classes of buildings.

Result of Large Number of Inspectors and Complaints

In addition to the work of these inspectors the district and company officers, when time permitted, contributed their usual number of inspections with the result that during the calendar year 1927 the records showed more than 256,000 inspections with 7,000 complaints. (These complaints were in the nature of notices in writing from the Fire Commissioner to owners and occupants to remedy conditions). Of the 7,000 complaints it was only necessary to summon 26 to court where it may be needless to say 26 convictions were obtained.

In all this vast number of inspections there was but one instance brought to my notice wherein an inspector was refused admittance to a portion of a building. This inspector had entered a drug store and after looking around the store floor proceeded to gain entrance to the cellar. He was told politely and firmly that the cellar was not to be inspected that day. As to why he was refused admittance to the cellar I will let you draw your own conclusions. I said it was a drug store.

Reduction in Boston's Fire Loss

During the years 1923 to 1926, inclusive, Boston was on the "disgraceful list" regarding fire losses. This of course is no secret as the losses were widely published throughout the country, as follows: 1923 total $6,286,299, 1924 total $4,735,595, year 1925 total $5,407,700 and 1926 total $5,199,965, the losses for 1927 which was the first calendar year of Boston's reorganized fire prevention division were but $3,937,329, a reduction of of approximately $1.50 per capita from the previous year, which has taken Boston out of the disgraceful list.

The National Board of Fire Underwriters committee on statistics and origin of fires reports that during the calendar year 1927 the fire loss for the country amounted to $478,245,620, a reduction of more than $100,000,000 less than the preceeding year and the National Fire Protection Association estimates this to be a 15% reduction. Boston's fire loss reduction during 1927 was 26% less than the preceeding year. This appreciable reduction in Boston may be attributed to many things, one of which, I am convinced, was the reorganization of the Fire Prevention Division.

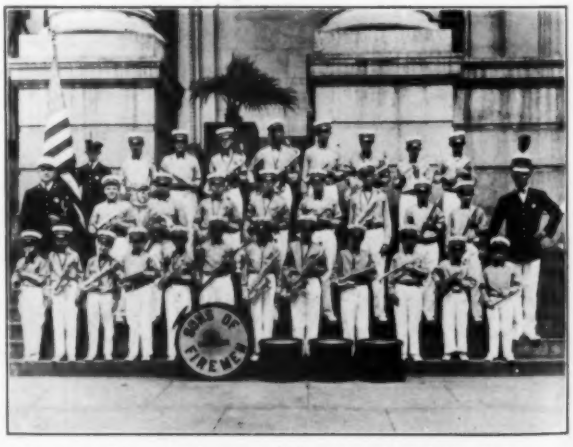
Duties of a Fire Prevention Inspector

The following is a brief outline of the duties of a fire prevention inspector.

He should start his tour of inspection with pencil and note book, the book to contain his name, and the day and hour of inspection and the location, street and number, of each building inspected. If there is no cause for complaint within a building nothing further than the location should be entered in the book except enter the "O. K."

In addition to the book the inspector should have printed forms of notice to "abate a fire menace" or to "remedy a condition." These printed forms should bear the name of the head of the fire department. A

(*Continued on page* 748)



Sons of Firemen Organized Into Band at New Orleans

Something new in the way of bands has been started in New Orleans, La., by Frederick H. Wood, director of the New Orleans Fire Department Band. It was he that originated the idea. The pay of the average fireman excludes the possibility of such luxuries as music. Mr. Wood offered to train the sons of firemen, in his spare time, if the boys would purchase the instruments. The Sons of New Orleans Firemen Band is an organization apart from municipal rules and is sponsored and directed by Mr. Wood. Only the children of city firemen may join. Chief Evans is very much pleased with the new musical unit.

Closing Iron Shutters to Hold Fire

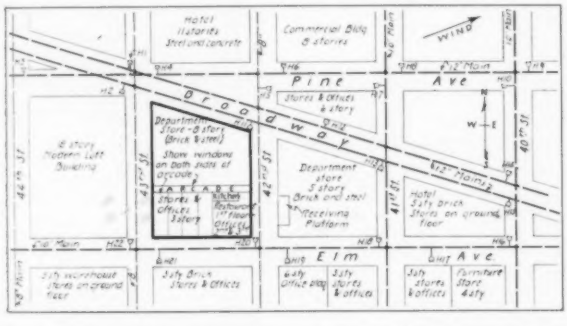
Principal Error in Handling the Fire Described in the Last Issue of This Journal Was Failure to Close Iron Shutters on Store Windows

BEYOND all doubt, the main reason for the spread of the fire, described in the last issue of this journal, to the department store was the open iron shutters on the rear windows of the department store. The failure of the department to notice these shutters open, and promptly close them, may be blamed for the spread of the fire to this big building.

As noted in the last issue of this journal, the city in which the fire occurred has a population of approximately 300,000. Water supply is fairly good, although the pressure rarely runs above 45 pounds in any of the mains, as the system is gravity feed type, and has no pumping facilities for boosting the pressure in the fire mains.

Fire Department

The department consists of 30 engine companies, practically all having engines of the triple combination



type—750 gallon capacity; eight ladder companies, three of which were equipped with aerial ladders and five with city service trucks.

Two chemical companies were located to cover outlying proportions.

In addition to the above, a water tower was also available, and was manned by members of a truck company in which station the tower was placed. In the event of an alarm calling out this particular truck company, it responded leaving two members to man the tower in the event of a special call. The tower responded only on special call.

Each alarm brings out three engine companies and one truck company, except the first alarm, on which two truck companies respond.

Description of Property Involved

The block in which the fire occurred is shown in the accompanying sketch in heavy outline. The department store was an eight story brick and steel building with wooden floors and wooden finishings throughout. At the time of the fire it was well stocked with Christmas goods. Directly to the south of the store was a row of three story buildings, on the ground floor of which were stores and, on the upper two floors, offices. The southeast corner of the block was occupied on the ground floor as a restaurant. Directly back of the restaurant was a kitchen and in the basement was also another kitchen which was used for baking on the premises.

Directly beneath the rear of this row of three story buildings, and on the ground floor, was an arcade running from 42nd to 43rd streets. This arcade was used as a promenade by shoppers and was lined on both sides by show windows—of the department store as well as the smaller stores on the south. Other buildings in the neighborhood of the fire are indicated in the diagram.

To the east of the fire block was a five story department store having an open receiving platform as shown in the diagram. The loading platform at the time of the fire was enclosed by only an open grill gate, and there was a great deal of material on the platform and the ground adjacent to it in the shape of packing boxes, merchandise, etc.

The department store windows overlooking the three-story buildings to the south were fitted with iron shutters on the upper three stories. However, several of the shutters were open at the time of the fire.

Furthermore, the department store was equipped with a sprinkler system, but due to alterations of the piping, and the failure of workmen to leave the system in an operative condition at the end of the work day, the sprinklers were inoperative. These two conditions had a great deal to do with the spread of the fire.

Another point which proved damaging insofar as the spread of the fire was concerned, was a ventilating duct running from the kitchen in the basement of the restaurant building to the roof. This duct was made of sheet iron and was not properly insulated. It was intended only to provide an exhaust for the fumes and smoke collecting in the basement kitchen.

The Fire

The fire, it is believed, started in the basement of the restaurant building shortly after the restaurant closed at 1:30 a. m. on a December morning.

When it was discovered by a patrolman, fire was coming through the roof of the restaurant building, it apparently having traveled through the ventilating duct from the basement, where it originated. On its passage upward it not only started fire in the blind attic over the restaurant building but it also ignited materials on the first, second, and third floors as well, for fires discovered on all three of these floors showed about the same stage of progress. Fire had already broken the glass windows at the rear of the restaurant and cracked show windows in the department store across the arcade.

The patrolman, upon discovering the fire, immediately pulled a box, bringing out a first alarm assignment of Engine Cos. Nos. 1, 2, and 3 and Truck Cos. Nos. 1 and 2.

Upon the arrival of the department, fire was also extending through the blind attic or cock loft over the three story row of buildings as was evident from smoke coming out from behind the cornice on the corner of 43rd Street and Elm Avenue.

The officer in command of the first alarm assignment immediately transmitted a second alarm and assigned the first alarm apparatus as follows: Engine Co. No. 1 was placed at hydrant No. 22 and a single line stretched to the arcade to operate in the show windows of the department store; Engine Co. No. 2 was placed at hydrant No. 19 and a single line stretched to operate

in the restaurant building; Engine Co. No. 3 was placed at hydrant No. 11 and a single line stretched to operate in the rear of the restaurant through the arcade. A second line was stretched from Engine Co. No. 2 by members of Truck Co. No. 1 and this line went to the second floor of the restaurant building.

The companies being lightly manned, it was not possible to get more streams in operation from the apparatus at hand.

It is the duty of the officer in command of the first alarm assignment to see that a survey is immediately made of the department store to make sure that shutters are closed, and other possible channels through which fire might reach the department store are covered.

The members of Truck Co. No. 2, should be assigned to this work.

If this is done promptly, then the problem of holding the fire to the row of three story buildings will be a simple one.

Suggested Method of Handling Fire

The assignment of lines on the first alarm response may be considered satisfactory.

Truck Co. No. 1, we will assume is first due at the fire. This company will assist in opening up for lines from engine companies on first alarm.

Second due truck company will immediately proceed up through the department store to make sure that all shutters and windows are closed, and that highly combustible materials are moved back from shutters, so that in the event of shutters being heated up to a high temperature by radiation or direct exposure, fire will will not start on any of the floors of the department store.

In addition to the second alarm which has already been transmitted by the first officer to arrive, a third alarm is justified, due to the fact that fire is spreading over the entire row of stores on Elm Avenue.

The assignment of lines from the second alarm response is as follows:

Engine 4 at hydrant No. 18 and a single line stretched to the roof of the store building alongside the restaurant. Cellar pipe to be put in operation to cut the fire off from spreading over the row.

Engine 5, to be stationed at hydrant 17, and a single line stretched to the top floor of the building alongside the restaurant building to operate into the cock loft through the ceiling. Engine Co. No. 6 at hydrant No. 2, and a single line stretched to second flood of restaurant building to kill fire burning around duct. Stretch a second line from Engine Co. No. 3, with the assistance of members of truck company, to third floor of restaurant building to kill any fire burning around duct on third floor. When this stream has accomplished this purpose, it may operate through ceiling on top floor of restaurant building into cock loft, if needed.

The first due engine company on third alarm, should be stationed at hydrant No. 12 and a single line stretched to basement of restaurant building. Second line may also be stretched from Engine Co No. 1, with the assistance of members of truck company to operate in basement of restaurant building.

By this arrangement of lines, and bearing in mind that the windows of the department store overlooking the fire building are properly covered with shutters, it is believed that the fire can be brought under control without spreading beyond the restaurant building.

In the event, however, that fire continued to increase, and there is danger from exposure of the restaurant building fire to the department store, one of the third alarm companies to be assigned to stretching in two lines to the southwest corner of roof of stores south of the department store, putting in service a 1½ inch nozzle with pipe holder to cover the exposure from the restaurant building.

However, it is believed the assignment as given will accomplish the purpose with moderate loss to the row, and will prevent fire from getting beyond this row.

E. Orange Firemen Trained for Lecturers

Firemen in East Orange, N. J., must do more than extinguish fires—they must be able to visit various places of public assembly and schools and talk on fire prevention subjects. James J. McMillan, chief of the fire department, has always been a firm believer in the value of such educational work. He said:

Chief James J. McMillan

"Shortly after our young men have been appointed to the force, we send them to the kindergarten to talk to the babies. They tell the little ones what to do with matches when they find them, the kind of box to keep them in and so forth, and they close their talk by inviting the youngsters to visit the firehouse nearest to the school.

"When the children arrive at the department quarters they are shown through the house and as much explained to them as is possible for them to understand. They are also given a simple talk on fie prevention.

"The purpose is two-fold. It teachers the young men how to talk five prevention and after they become proficient with the small children, they are sent to the higher grades. In time some of them become very good public speakers. Talks are given at the Rotary, Kiwanis and Lions Clubs, Industrial shows, Y. M. C. A., and at the different factories in the city during lunch hour,—in fact any place where we can get an audience. Secondly, through the children the message of fire prevention is carried into homes where English is seldom spoken and where an invasion by the firemen would be misunderstood.

"We aim, first, to teach our men to talk fire prevention and, second, to fight the fire before it starts by teaching carefullness and consideration. That our efforts are bearing fruit is evidenced by our very low fire losses for the first six months of 1928, in comparison with the first six months of past years.

"The officers and members of the Department make inspections of factories, blocks, cellars, etc., from time to time to guard against the accumulation of rubbish and inflammable material and to note conditions liable to cause fires. These inspections are of great value to the department because they allow the men to become familiar with the construction of the buildings and also the nature of their contents."

Chief McMillan is an old-time fireman. He entered the department as a call man on February 3, 1896, and was made a permanent fireman in June, 1903. He was advanced to captain in 1908 and to chief in 1923.

Long before he was made chief, he lectured on fire prevention in other cities at the request of some city official. He is entirely booked up now to lecture at various places during Fire Prevention Week.

Chief McMillan stated, "The old fashioned fire chief remained in quarters and waited for the alarm to come in. Then he went out and extinguished the fire. The modern chief seeks to fight fires before they start by teaching fire prevention."

Depew, N. Y., to Have Apparatus—The Village Board of Depew, N. Y., is considering the purchase of a triple combination fire apparatus.

Cincinnati Will Have New Fire Station—A contract has been awarded by Col. Sherrill, City Manager of Cleveland, Ohio, for a new fire house, at a cost of $26,290.

Frostberg, Md., Firemen Celebrate Golden Jubilee—The Fire Department of Frostberg, Md., on July 23 celebrated its golden jubilee. Five bands, a mummers' parade, fireworks, etc., signalized the event.

WITH THE EDITOR

The Chief as a Leader

The office of chief of the fire department of a city or town in the present day carries with it many responsibilities beyond the mere extinguishment of fire. The chief, to be successful in his office, must be a leader of men. His post as head of the fire department naturally fits him to take this position in the community.

There are many ways in which this leadership can become a real power for good. Of course, it is an immense advantage if the chief can cultivate the art of public speaking. A magnetic speaker can wield an influence that is potent in swaying public opinion. But every man is not born a speaker and there are many who cannot talk in public, no matter how hard they try. This gift, however, while important and a great help, is by no means absolutely essential to the leadership of the chief. His knowledge in all things connected with the control of fire give him a standing in this respect among the citizens which none other can approach.

The chief is the natural director in matters connected with fire prevention and fire protection, and his word should be paramount in everything pertaining to this branch of the city's welfare. He knows the hazardous spots of the city as no other does; he knows in what direction the fight against fire carelessness should best be directed, and he can best plan the line of attack which will bring results in the campaign.

The natural trend is to choose the chief of the city or town to lead in all matters connected with fire prevention and protection campaigns. Let us hope this practice will become general and universal.

Below the Belt

In commenting upon the New York fire department's decision not to participate in the International Fire Tournament, Turin, Italy, because of the stipulation that the New York firemen would have to pay their way back to New York from that country, the *New York Sun*, under date of August 6th says: "The lads of the firehouses have gone back to their dominoes. Italy's place is now dimly remote, incredibly far from Queenstown Harbor. The Shannon is a river of song and story and the Po can flow back into the dust of the encyclopedia. Somebody dwelling beside the Tiber has closed the book of adventure on Engine Company 39. What shall be done with the traveling bags and things presented to the heroes who were to cross the sea? Who can recall the toasts of a dozen banquets? The promises to wives and sweethearts of treasures that would strip the shores of the Mediterranean—who will make good these pledges so happily given? Life drops down to the prosaic, but woman cushions the fall. *Since there are to be no trophies from the Old World let him remember, should duty's path cross a dress shop, that she wears a* 38."

In other words, the suggestion of the *New York Sun* is for firemen to "lift" something that does not belong to them at the next fire to which they report. Maybe this was intended as a jest—and we naturally assume it was—but an ugly and unjust inference may be drawn from it.

Does the Editor of the *New York Sun* really believe in his heart that New York firemen follow such a practice?

If he does not, it would have been only decency for him to refrain from a jest which casts an unfair reflection upon the honesty of New York firemen.

If he does, he certainly should have gotten in touch with the New York fire department headquarters before making the innuendo. They could have set him right.

Back in the distant past there was a time when such occurrences might have been classed as occasional, but under the vigorous rules of the New York fire department, and the scrutiny observed by the vast majority of men who are anxious to uphold the high reputation of New York firemen, theft at fires has been eliminated.

It is cheap humor, indeed, to repeat an old joke which puts one of the finest fire fighting organizations in the world under a false shadow.

And finally, it is not unlikely that the *New York Sun's* editor would be the first to raise a howl if firemen were caught in the act which he so subtly suggests to them. Maybe he is just trying to develop some front page scare-head copy by his editorial page intimation.

At any rate, such a slur upon the honesty of the fire service deserves the most vigorous condemnation.

Menace of Angle Parking

A phase of the automobile problem which should receive more attention than it does is the practice of parking at an angle where cars are permitted to be parked at a slant from the curb instead of flush with it. This plan, adopted by some municipalities, will, under certain conditions, constitute a very serious fire-fighting drawback.

This practice, in streets where buildings of several stories in height are to be found, will seriously interfere with emergency rescue work at a fire, as the aerial truck must be placed, at most, 25 feet from the building in order to obtain the correct pitch of the ladders. The automobiles parked at an angle in front of a building on fire would preclude the aerial apparatus being used, as it would be impossible to approach near enough to the curb to effectively use the ladder.

Aside from this particular phase of angle parking, there is also the congestion of space resulting from this plan. With the cars extending out into the street, especially if it is a narrow thoroughfare, the available space for moving traffic will be greatly congested, and in the busy hours there will be danger of jams and tangles of traffic, unless the situation is handled very vigorously by the traffic officer.

A much more practical solution of the traffic problem than angle parking is to be found in frequent allotted space for cars along crowded highways, either in vacant lots or in public garages built for the purpose. The latter plan, which is becoming increasingly popular in large cities, provides a method of removing the menace to the fire department of parked cars along congested thoroughfares.

FIRE ALARM SYSTEM HELPS FIREMEN TO GIVE SERVICE

Proper Signalling System Increased Efficiency of Department 40%—More Important Than Adequately Manned Apparatus and Equipment

G. P. ALLEN,
Chief Signal Bureau, Jacksonville, Fla.

ANY municipality having a fire department, which does not provide itself with a modern fire alarm signal system, deserves only partial benefits from the money it spends to establish and maintain a fire department. This is because the value of the fire department, depends to a great extent, upon the efficiency of the fire alarm system and the firemen, who are only able to render full measure of service for which they are paid, through means of such an alarm system.

Many fire chiefs throughout the country having fire alarm systems believe that the alarm system contributes to the increased efficiency of their Departments, on an average at least forty per cent, and in some instances more. It must be conceded that full measure of service from the fire department surely depends on a fire alarm system.

Fire fighting apparatus properly manned is almost worthless unless, there is a dependable way of letting them know there is a fire and the location. From all records available, and in the opinion of every well known fire expert, it is conceded that the greatest element existing which goes toward causing terrific loss, is the time consumed between the discovery of the fire, and the sounding of the alarm. It therefore follows that if this gap can be bridged and the time reduced to any extent, more will be accomplished toward reducing the average fire loss than anything else.

There is no stronger argument for a fire alarm system to Municipalities than can be found in the fire underwriters rules for grading cities and towns with reference to their fire defences. A proper signaling system is positively required to establish increased harmonious relations with the taxpayers in the expenditure of money for public improvements to which they are rightfully entitled.

There are, however, limits of importance to a fire alarm signaling system. These are graded with reference to population and area.

There is nothing a municipality buys, that brings more returns than the fire signaling apparatus, figured in years of service, figured in protection of life and property, or figured in dollars and cents, fire signaling stands at the top of the list.

There are many fire alarm systems in the United States which have been giving service day after day and year after year, for fifty years or more. When you figure the maintenance cost on this basis, it is virtually nothing.

Dickinson Named Chief in Brockton

Frank F. Dickinson has been officially appointed chief of the fire department in Brockton, Mass., succeeding the late Chief William F. Daly who was drowned in a lake in the Maine woods.

Chief Dickinson was born in Underhill, Vt., on March 31, 1870. When he came to Brockton, he was a carpenter by trade, but the work lacked the lure of a fireman's life. He was appointed a fireman on June 17, 1891. In 1905 he was made lieutenant and in 1909, captain. On May 29, 1916, just one week after the late William F. Daly was made chief, he was named first assistant chief.

Two other appointments were made at this time. Second Deputy John Murphy was raised to first deputy chief and Captain Frank L. Taylor was promoted to second deputy.

Bronze Cable Strengthens Life Belt

Since the days when America's first fire department, founded in Philadelphia by Benjamin Franklin, fought fires with leather buckets and big canvas carrying bags as the only equipment, firemen in action have been depending upon cowhide. Today, life belts made of leather are considered important equipment. The latest of these has just been developed by the fire bureau of Portland, Ore. During the summer two firemen fell to their deaths when the snap on a belt tore loose. Immediately the bureau improved the best belt it had and now has the new one in service according to Chief Edward Grenfell.

Improved Life Belt in Use at Portland, Ore.

Around the outside of the wide leather life belt runs a bronze cable. This passes through the ring by which a big snap is attached to the belt. With this added safety device around his waist, a fireman scaling a building with a burden on his back can attach the big snap to any solid projection and safely let loose with both hands to have them free for any service. If he is sliding down a perpendicular wall on a rope that is looped through the big snap, as shown in the above illustration, his safety factor is high. This belt, as improved by his department, should save lives. Chief Grenfell believes.

Secretary of Memphis Fire Department Dead—John M. Dolan, Secretary of the Memphis, Tenn., fire department, died in that city on July 5.

Woodhouse Company Makes Many Sales—The Woodhouse Manufacturing Company have reported a number of sales as follows: 750-gallon Maxim pumper to Weehawken, N. J.; Maxim City service truck to Babylon, L. I. N. Y.; Maxim combination chemical car to Lawrence-Cedarhurst, L. I., N. Y.; 1,000-gallon Maxim pumper to Atlantic Highlands, N. J.; 600-gallon Maxim pumper to East Islip, L. I., N. Y., and two 1,000-gallon Maxim pumpers and one Maxim combination chemical car to Manhasset, L. I., N. Y.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Ignition of Oil in Journal Box

To the Editor:

Will you kindly answer the following questions in an early issue of your journal?

What is the cause of fires in journal boxes of railroad cars?

(A) While the car is in motion; (B) when the car has been standing for one or two days?

Would moisture entering the box and coming in contact with the oil and waste cause self ignition?

E. F. K.

Answer: Fires in journal boxes of railroad cars which are in motion are caused by insufficient lubrication of the bearing. For example, if the waste in the journal box has not been supplied with oil for some time, it gets partly dry and not feeding oil to the bearing, the friction between the shaft and the bearing causes heating which will eventually ignite the waste. In other words, this is strictly a friction fire—caused by increase in temperature due to the friction of an improperly lubricated bearing.

Where a fire starts in a journal box of a car which has been standing for two or three days, it is an indication that the oil used in the journal box contained either some vegetable or animal element conducive to spontaneous ignition. Lubricating oil containing such animal or vegetable oils may cause spontaneous ignition of the waste which is impregnated with these oils and which is located in the journal box. This seems to be the most plausible explanation of fire occurring in journal boxes where the car has stood for several days. Moisture would aid in promoting spontaneous ignition.

Water on High Tension Lines

To the Editor:

Considerable discussion has been carried on by members of this company regarding the use of water streams on high tension wires, switches, transformers, etc.

We would appreciate any information you might be able to give us as to the dangers attached thereto.

H. G. E.

Answer: There is apparently but a vague understanding of the possible hazards in connection with the use of water streams on live electrical apparatus.

It is commonly assumed that the use of water streams around high tension wires is invariably fatal—that water streams must not be used.

The following data may shed a little light on the above, and create a clearer impression of just how far water streams can be safely used around electric fires.

Attention is therefore called to the experiment performed by one of the foremost electrical engineers in this country, F. J. Hoxie.

He used a current of 3,000 volts potential. One side of the circuit was connected to a loop of bare copper wire about two inches in diameter. The other side of the circuit was connected to the underground water pipes. Fifty feet of 2½ inch cotton rubber-lined hose was attached to a hydrant, and provided with a standard 1⅛ inch nozzle. The water was throttled down so as to make a continuous and nearly solid stream.

The end of the nozzle was fastened in porcelain cleats twelve feet from the loop of copper wire. On the floor near the nozzle was placed a sheet of lead in metallic connection with the water pipe system.

Having first poured water on the sheet of lead to insure good contact, Mr. Hoxie stood upon it with his bare feet and grasped the nozzle firmly with both hands, they also being wet. The most of the current conducted by the hose stream passed through his body to the other side of the circuit; as the resistance of the water in the fifty feet of hose between the nozzle and hydrant was very great compared with that of the human body.

The shock which he experienced was very slight. The nozzle tip was changed to 1¼ inch, the sensation being somewhat increased but not unpleasant.

The water used in the tests was town drinking water. Mineral well water under the same conditions would give electric current of four times the strength; sea water would give a current about two hundred times as strong.

Safe Distances with Fresh Water Streams

The following table has been worked out on the basis of permitting a flow of current through the body which, while very unpleasant, would in no manner be dangerous.

It gives the distances at which nozzle must be kept (minimum distances) to make it safe for the men holding it.

Voltage	Safe Distance 1⅛-inch Nozzle Feet	Safe Distance 1¼-inch Nozzle Feet
1100	6	9
2200	11	16
3300	15	22
5500	18	27
6600	19	29
11000	20	30
22000	25	33
33000	30	40

The above figures apply to fresh water only. If salt water (sea water) were being used, distances two hundred times as great as the above should be used; streams of such length would, of course, be impracticable. This is just another way of saying that salt water streams must be kept off high voltage apparatus.

Chemical Extinguisher Streams

There is great danger to a man using soda and acid streams or foam streams on high voltage apparatus. They should not be used.

Streams from carbon tetrachloride extinguishers are not only safe to use, but the carbon-tetrachloride fluid is actually capable of breaking an electric arc. The chief disadvantage of these extinguishers is that their small capacity does not make them very effective in lowering the temperature of heated electric equipment to a point below the reignition temperature of insulation.

In short, the dangers in fighting fire around live high tension electric apparatus lies, in fact, that the operator holding the nozzle is very often apt to get too close to the burning equipment, causing an excessive flow of current through the path of the water stream and through his body, or else cause an electric arc between the equipment and the nozzle which in most cases would prove disasterous to the operator. Such equipment, whether it be switchboard, oil switches, transformers, etc., should be made electrically "dead" before attempting to extinguish fire around it.

Cleveland Lieutenant Questions

To the Editor:

I am enclosing a list of questions of a recent Lieutenant's examination held in Cleveland.

Please publish the answers in your "Questions and Answers Column" and oblige.

Yours very truly,

W. B. M.,
Cleveland, O.

Question 1: (a) What is the proper distance to place the butt of a ladder (40 foot) from a building?

(b) How do you determine this?

Answer 1: (a) This depends on the type of ladder. If it is a plain non-trussed ladder, the base should be placed 5 feet from the building. If it is a trussed ladder, the base should be placed 10 feet from the building.

(b) The rules for determining the distance the bases of ladders should be placed from building are: In the case of non-trussed ladders, the base should be placed one-eighth the length of the ladder from the building; for trussed ladders, the distance is equal to one-fifth the length of the ladder in feet plus two.

Question 2: Describe the difference beween a dust explosion and spontaneous combustion.

Answer 2: A dust explosion at fires is caused by dust being dislodged from ledges, rafters, or by the opening up of a dust laden room, etc. This dust upon being mixed with the air (proper quantities of each being required) explodes in the presence of an open flame. An explosion is practically an instantaneous process.

Spontaneous combustion (more correctly termed spontaneous ignition) may in general be said to be possible in all classes of substances that will burn, but only possible because of some special favorable condition or quality. Three conditions are always necessary, namely, that air be present, that the material be finely divided so as to present a relatively large surface subject to oxidation, and that the material be so placed that heat cannot readily escape. A pile of finely divided material, such as coal, satisfies all three of these conditions. Oily rags piled in a corner in such a way that heat cannot readily escape will also cause fire in the same way.

From the above the following differences may be cited: difference in cause; difference of time of action. All materials that will burn are subject to spontaneous conbustion while dust explosions are limited to finely powdered combustible products. The dust explosion is of short duration while the process of spontaneous ignition may cover a comparatively great period of time.

Question 3: What first aid treatment is given persons overcome by smoke or electric shock?

Answer 3: Assuming no resuscitation apparatus is available and that the victim has to be brought around by artificial respiration, the method of resuscitation would be as described in the March 23 issue of this journal (page 283).

Accident to Apparatus

Question 4: In responding to a fire you meet with another fire. State in detail what you would do.

Answer 4: Drop off a man at the nearest fire alarm box to the second fire and instruct him to pull an alarm, he is to do what he can alone at the second fire until the apparatus in response to his alarm pulls up. In the meantime, the company continues on its way to the original alarm. Should there be immediate danger to life at the second fire, then, of course, the above would not apply. Should there be such danger to life, the company should stop at the second fire. One man should send in necessary alarm; fire headquarters should be notified immediately of what the company has done so that the original assignment can be turned over to some other company.

Question 5: Describe the latest and most up-to-date method of controlling oil fires.

Answer 5: The only extinguishing agent which is invariably effective on oil fires is foam (filled with carbon dioxide gas.) This foam is generated by the mixing of two solutions or of water and foam powder. This foam flows readily over the surface of the oil and smothers the fire which is burning. Apparatus for generating foam is made in various sizes from the small 2½ gallon extinguisher to the huge installation such as is found in the oil fields where a whole crop of tanks are protected by a single foam generator.

Question 6: You are sitting in the front row of a theatre and notice smoke coming from under the stage during the intermission. What would be your method of procedure?

Answer 6: Get up and quietly investigate. If the smoke was due to fire that could not quickly be put out by the appliances right at hand, notify stage manager or stage electrician with instructions that the fire department be called; retrace your steps, close the door beneath the stage tightly, then step to the stage and make an announcement somewhat along the following lines: "Ladies and gentlemen: There is apt to be a little smoke in the theatre from a small fire which is well under control. We would like all to leave the building quietly and by any exits you may choose—preferably the front doors, so that we may have a chance to look over the material around the stage and see that no fire remains. We are asking that you leave the building promptly but quietly."

Stand by until all are out, including stage hands and actors, except those who are using theatre equipment to combat fire. Then give a hand and aid in fighting the fire until the department arrives.

Question 7: Name six subdivisions incidental to operating at a fire. Describe them in their proper order.

Answer 7: Six subdivisions incidental to operating at a fire are: Size-up, calling for help, saving of life, covering exposures, extinguishing fire, overhauling.

By size-up is meant a quick mental analysis of the fire, taking into account all details which have to do with the handling of the fire, such as size of building, nature of contents, hazard to life, extent of fire, direction of travel, direction of wind, nature of proximity of exposures, auxiliary fire protection available for use by fire department, and other such similar points.

Calling of Help: The size-up should determine whether or not additional help is needed.

If it is likely to be needed, it should be called at once. It is far better to call additional apparatus, even though it is not absolutely necessary, than to avoid calling additional apparatus where its presence would make possible the early checking of a fire and the saving of property resulting thereby.

Of course, the calling of much more apparatus than is actually needed would reflect upon the judgment of the officer, and in examination might result in his being penalized for lack of judgment.

But too great a stress cannot be laid upon the importance of calling additional help instantly if such is likely to be required.

Saving of Life: This is the operation which deserves first attention at all fires. Although it is not placed in the list ahead of calling additional help, still it must be remembered that one man can be assigned to call additional help while the balance of the department operates in saving life.

It is most essential that additional help be called without delay even though the number of lives in danger requires the attention of all men present at the fire. Do not forget that while life is being saved the fire is gaining in proportion, and by the time the life-saving operations are over it may be late to call additional help.

Covering Exposures: Covering exposures is frequently of greater immediate importance than attempting to extinguish the fire.

In many types of establishments it may be a physical impossibility to extinguish the fire in a particular establishment, whereas it is possible to head off the fire from extending and thereby confine the destruction of the building in which the fire originated.

On the other hand, if all attention were directed to extinguishing the fire, fire may pass to exposed buildings and a conflagration result thereby.

It may be safely said that where the fire is of such proportions that it cannot readily be extinguished and where other buildings are seriously exposed to the fire, first attention should be directed to the exposed buildings.

But if it is certain that the fire can be extinguished promptly with the apparatus on hand, then judgment in this particular case will have to be exercised as to whther the fire is to be extinguished with the apparatus available or whether exposures are first covered and then the fire extinguished afterward.

Numerous large fires have resulted through the failure of the department to cover exposures. Covering exposures is, therefore, considered of equal importance to operating on the fire, and in many cases it receives preference particularly where additional apparatus is coming in on further alarms.

Extinguishing Fires: This operation is the major operation of all fire departments and, broadly, it includes covering exposures as well as actually fighting the fire.

The methods of extinguishing the many types of fires are varied, each fire requiring a particular method and particular aparatus.

One point, however, should be borne in mind in connection with extinguishing fires, and that is the judicious use of water.

Frequently the water damage is far greater than fire damage, and a sensible use of nozzles and pressures makes possible the reduction of water damage to a minimum.

The employment of shut-off nozzles is particularly effective in reducing water damage in that a stream can be promptly stopped when it is no longer needed.

The use of oversize nozzles is a fault of many departments and is one which must eventually be rectified.

Overhauling: Overhauling might be classed as cleaning up after fires.

The object of overhauling is to reduce property damage to a minimum and check damage to goods through water passing from upper to lower floors of a building.

Overhauling also serves the purpose of making sure that all fire has been extinguished, for on opening up woodwork, plaster walls, ceilings, and even floors, concealed fire is located and extinguished.

The efficiency of a fire department is frequently determined by its thoroughness in overhauling after a fire.

NIGHT FIRE SPREADS THROUGH SHAFTS BEFORE BEING DISCOVERED

Pittsburgh, Pa., Has One of It's Worst Night Fires in Years—Several Firemen Injured and Overcome—Fire Confined to Building

By WILLIAM E. PATTERSON,
Bureau of Fire, Pittsburgh, Pa.

THE largest and most destructive night fire that Pittsburgh firemen have had to battle with for many months, broke out late on Tuesday night, July 3, when flames from all indications, of incendiary origin, swept through the Cameo Theater building. This was a five story brick structure with stone front, located at 347 Fifth Avenue and running through the block to Oliver Avenue, between Wood and Smithfield Streets, in the downtown business district of the city. Before firemen called on the first alarm of fire had arrived on the scene, the flames had swept through the Fifth Avenue end of the building from the second floor where the fire had evidently started in the premises occupied by the Colonial Credit Clothing Company and had broken through the roof and were quickly spreading to the Oliver Avenue end of the building, a six story brick structure. Fifteen minutes after the fire was discovered, the flames had extended almost throughout the entire building.

Chief Richard L. Smith, Pittsburgh, Having a Cut on His Hand Dressed by Police and Fire Surgeon Daniel E. Sable.

One by one the upper floors and the roof crashed through the building to the first floor and the basement, several firemen having a narrow escape from death or serious injury by being thrown down the front flight of steps leading from the second floor in the front of the building, where they were working, to the Fifth Avenue entrance.

Sparks and burning embers were carried by the draft of the flames and the wind over quite a section of the downtown business district endangering surrounding buildings, some of the sparks and burning embers igniting awnings on the twenty-fifth floor of the Oliver office building which takes in the entire block on Smithfield Street, between Oliver and Sixth Avenues, and the steeple of the Trinity Episcopal Cathedral on Sixth Avenue. These fires were however, extinguished by firemen with hand chemical extinguishers before they done any material damage.

The fire which evidently had been burning for quite a long while before being noticed, was discovered by an employe on night duty in the offices of the A. D. T. Company located on the second floor of the Park building adjoining the burned building. This man, upon opening a window that opened into an areaway between the office structure and the theater building found the fire raging up through the light shaft, the windows of which opened into this areaway on the different floors. He immediately called the Fire Alarm Office on the telephone and notified them of the fire and Engine Company No. 3 and Emergency Squad Company No. 1 were dispatched to the scene of the fire on a "Still Alarm" by the operator.

These two Fire Companies had just left their quarters when Station 61, a few hundred feet from the burning building, was pulled by a Police Officer. The alarm from the street box reaching the Fire Department at 11:15 p. m. eastern standard time, and was answered by Engine Companies No. 32, 18 and 30 and Truck Companies No. 1 and 3 and Water Tower Company No. 1, in addition to the two companies which answered the "still alarm," in command of Battalion Chief George P. Sparr of the First Battalion and Deputy Chief, Frank G. Jones.

Immediately upon the arrival of the first alarm companies, the firemen making their way into the building finding the fire had full possession of the second floor and had already extended to the upper floors, Deputy Chief Jones sent in the second, third and fourth alarms at 11:20, 11:25 and 11:45 p. m. the four alarms calling sixteen Engine Companies, one Emergency Squad Company, two Truck Companies and one Water Tower Company to the scene of the fire.

Immediately upon his arrival, Chief Richard L. Smith took personal charge of the fire fighting. The fire was fought from the Fifth and Oliver Avenue ends of the building and from the roofs of adjoining structures, the firemen dragging their lines of hose up aerial ladders on both ends of the building and up the fire escape on the Oliver Avenue end of the building into the interior of the burning structure, where the fire was fought at close range and by hard work the firemen succeeded in confining the fire to the Cameo building.

Placing Fire Apparatus

Combination deluge wagon No. 1 placed in front of the burning building on Fifth Avenue did most efficient service with its water tower and two deck turrett streams, a 2-inch tip being used on the tower stream and an 1¾-inch tip on each of the turrett streams, pressure being furnished through nine lines of hose by four American-LaFrance 1000 gal. pumpers, two American-LaFrance 750-gal. pumpers and one 900-gal. Metropolitan tractor drawn steam fire engine, these three powerful high pressure streams, which practically took care of the entire front of the building, soon driving the flames back and confining them within the building.

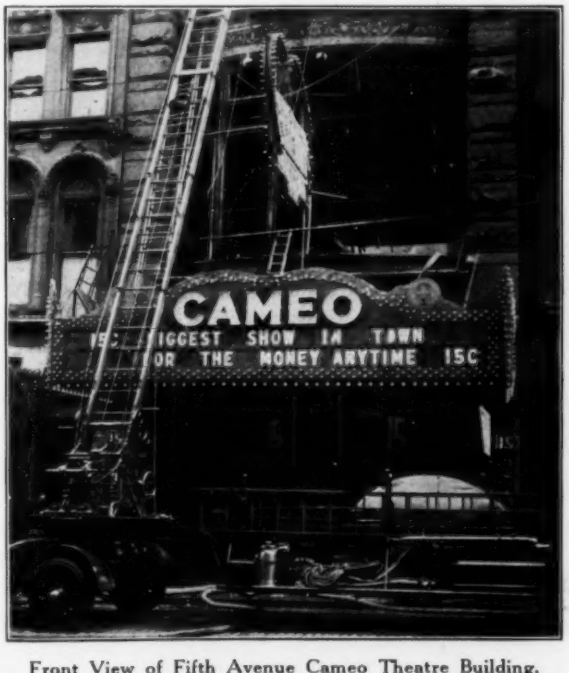
In addition to the three high pressure streams of the deluge wagon used in controlling and extinguishing the fire, twenty-three pumper and engine streams and one hydrant stream with 1⅛ and 1¼-inch tips were used. Some 1,600 feet of 3-inch hose, 11,250 feet of 2½-inch and 510 feet of 1-inch lead line hose, all cotton rubber lined and one 40-gal. chemical tank with 200 feet of chemical hose and 675 feet of ladders were also utilized.

Plenty of fire hydrants of the Ludlow type with single and double 4½-inch openings with pressures from eighty to one hundred pounds fed from large volume water mains were available which gave the firemen all the water desired to fight the fire.

A total manual force of 160 uniformed firemen were on duty at the fire, at which men from both platoons or turns did service.

Twenty-five pieces of fire apparatus, all motor driven and tractor drawn were in service at the fire.

Chief Richard L. Smith was cut on hand by piece of metal cornice. All of the injured firemen were given first aid treatment on the fire ground by Fire Surgeon Daniel E. Sable, some of



Front View of Fifth Avenue Cameo Theatre Building, Pittsburgh, After Fire.

them being sent to the Hospital for further treatment and attention, where they were confined for a period of several days or more. In addition to the firemen who were injured a number of others were more or less overcome by smoke.

The burned building was an old style brick structure built many years ago with a massive constructed stone front on the Fifth Avenue end of the building, which replaced the old front a number of years ago. The building fronted approximately 30 feet on Fifth Avenue and extended through the block a distance of approximately 160 feet to Oliver Avenue and was five stories in height on Fifth Avenue and six stories on Oliver Avenue. The interior of the building was of wood construction with a large light shaft built on one side of the building about midway between Fifth and Oliver Avenues with windows on three sides on each floor above the first floor up through which the fire traveled rapidly and spread to the upper floors.

An elevator and open staircase was located in the front of the building leading to Fifth Avenue and a staircase and freight elevator on the Oliver Avenue end of the building.

The Cameo Theater occupied the entire first floor of the building with main entrance and exists on Fifth Avenue and two exits on Oliver Avenue. The upper floors of the building

Looking Down Into Ruins, Showing Complete Destruction.

were occupied by a clothing store, beauty parlor, tailor shops, moving picture and photographic studios and other offices of various kinds.

The building was equipped with a standpipe on the Oliver Avenue end of the building and also a sprinkler system, both of which were out of commission at the time of the fire.

A spiral fire escape on the Oliver Avenue end of the building and hand fire extinguishers distributed in the Theater and other parts of the building completed the private fire protection of the burned structure.

Shortly after the arrival of the first alarm Fire Companies, Battalion Chief George P. Sparr of the First Battalion in making his way through the burning building from Oliver Avenue found a broom burning in the hall-way of one of the upper floors, which was entirely remote from the fire that was raging in the front of the building towards Fifth Avenue. The broom had evidently been ignited by some person or persons unknown and carried to the point in the hall-way where it was discovered by Chief Sparr. This discovery together with the finding of a metal cash box that had been removed from a desk on one of the upper floors and the lid cut open with a sharp tool or instrument of some kind which was found in the ruins by firemen, led to an investigation and questioning of occupants and employes of the building by Fire Chief Smith and his Deputies and Detectives from the Detective Bureau but up to this writing no sufficient evidence has been unearthed to hold any person or persons for setting fire to the building.

The duration of the fire was 13 hours and 37 minutes and the lose on building and contents will total over $100,000.

Sioux City Firemen Fight for Pay Increase—Firemen in Sioux City, Ia., are continuing their fight for a pay increase. The firemen have struggled for more than two years to have their pay advanced. In 1926, the city voted to increase the pay $15 a month, but the city council refused to grant the increase as there were no funds available. Several times since then, the men have asked that the city council increase their pay rate but have not been successful.

Volunteer Department Makes Good Stop

The fire department of Greenport, N. Y., under the direction of Chief Norman Klipp, made a good stop of a very threatening fire recently in the shipyard of the Greenport Basin and Construction Company. The force is composed entirely of volunteers and is equipped with American-LaFrance motor pumpers.

Boat Building Shed at Greenport, N. Y., Saved by Volunteer Fire Department.

The blaze broke out during the noon hour in some old timbers and lumber underneath the 63 ft. motor yacht "Hurry Up 11", owned by C. Conway, of New York, and which had just been overhauled and painted preparatory to sliding over to the ways for launching. Greasy shavings and old paint scales spread the flames with great rapidity and the fire soon enveloped the yacht and spread to several nearby vessels which had been hauled out in the yard for winter storage. The yard whistle was sounded and an alarm turned in; but by the time the Greenport fire department reached the scene the flames had caught on the end of the large frame boat building shop and the entire yard seemed doomed.

Two lines were run from the motor pumper of the Eagle Hose Company which connected to a hydrant on Main Street and one line was run from the pumper of the Relief Hose Company which drafted salt water from the Main Street Dock. Blazing bits of tar paper blew into open windows and started several small fires in other yard buildings, but these fires were quickly put out with buckets of water and chemical extinguishers.

Fortunately there was only a light breeze which aided the firemen in bringing the flames under control and saving the

Motor Yacht "Hurry Up 11," at Left, Under which Fire Originated Among Some Old Lumber; Schooner Yacht "Katrina," Right Foreground Also Damaged

extensive plant of the boat yard. The wooden housing on the 100 ft. iron schooner "Katrina" was burned and the masts and deck charred. The 42 ft. motor yacht "Droben" which was hauled out near the yacht "Hurry Up 11" was badly damaged and the sloops "Docara" and "Arbeka" were partly burned.

The fire on the corner of the boat building shed was extinguished in the nick of time before the big structure became involved. A coast guard patrol boat towed two yachts in the basin near the fire out into the stream. Some damage by

charring was caused to one of the marine railways in the yard. The entire loss was estimated at $60,000.

The two motor pumpers in service were both 750-gallon American-LaFrance triple combinations. About 2500 feet of 2½-inch hose was laid. The water pressure at the hydrant was 40 pounds.

HARRY BELKNAP.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to latter investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending August 10

BOSTON, MASS.—Metropolitan theatre stage damaged	25
EAST SYRACUSE, N. Y.—Greiner Bros. feed mill	70
MALONE, N. Y.—Three bldgs. of Bronze Powder Works, Inc	45
NORWOOD, N. C.—Norwood Lumber Co	25
REVERE, MASS.—Dance hall and hotel at Revere Beach	45
COLUMBUS, OHIO—WAIU broadcasting station of American Ins. Union	85
MIDVILLE, GA.—Plant of Midville Veneer Co	135
SAN ANTONIO, TEX.—Five planes and a hangar at Kelly Field	90
WINNIPEG, CAN.—Bldg. and contents of Purity Ice Cream warehouse	40
STEUBENVILLE, OHIO—Coopen-Kline dry goods store	30
NORWOOD, N. C.—Plant of Norwood Lumber Co	25
BERLIN, MD.—Jarvis Poultry Farms incubator house	25
NASHVILLE, TENN.—Home of Paul Davis	95
SAN FRANCISCO, CAL.—Three-story apartment house	90
CASHMERE, WASH.—Business section damaged	75
TOLEDO, OHIO—Business bldg. at Spencer street	195
EDGERTON, WIS.—Three-story bldg. of Monarch Laboratories	220
CALUMET, MICH.—Yacht Peggy B, owned by H. Bleckley	45
EAST NEWPORT, ME.—General store, feed store and office bldg.	45
SELMA, LA.—Planing mill of Grat Timber & Mfg. Co	195
AUBURN, WIS.—Two barns and contents on G. McDougall farm	30
KENDALLVILLE, IND.—Business section destroyed	95
LINDEN, N. J.—Tank 105 of Bayway Refinery of Stand. Oil Co.	50

Week Ending Aug. 17

SAWYER, WASH.—Cold storage plant	195
NEWBURYPORT, MASS.—Joy building and Newburyport News building	40
MONTEZUMA, LA.—Five tanks of Standard Oil and Mid-Continent Oil Cos	30
EAST CARTHAGE, MO.—Head house of Morrow-Kidder Milling Co. flour mills	100
SCRANTON, PA.—Summer homes at Lake Winola	30
NASHVILLE, TENN.—Flooring plant of Farris Hardwood Lumber Co	170
HOUSTON, TEX.—Cold treating plant of Tex. Corp., Port Arthur refinery	1,000,000
NEWARK, N. J.—Mill, lumber sheds and trucks of Essex Sash & Door Co	75
HARVEY, LA.—Nine frame dwellings	70
WOONSOCKET, R. I.—Sam Golden storehouse	50
DELPHI, IND.—Stock rooms and warehouse of Great Western Canning Co	50
TOPINABEE, MICH.—Hotel Topinabee	245
MONTREAL, QUE.—Plant and lumber yard of Pigeon & Drapeau	125
CHAMPAIGN, ILL.—Grain elevator of Champaign Grain & Milling Co	50
HAMMOND, IND.—Plant of Ind. Sanitary Pottery Co	250
WILLIAMS, ARIZ.—Municipal light and power plant	25
NEEDLES, CAL.—Bldg. of Hodge Motor & Supply Co	45
ANTIGO, WIS.—Warehouse of Howes Creamery Co	195
BALTIMORE, MD.—Plant of Chesapeake Waste Paper Co	100
PORT HENRY, N. Y.—Three store and apt. bldgs. in Witherbee near here	140
ANDOVER, MASS.—Stock and machy. of Case Paper Board Co	65
OKLAHOMA CITY, OKLA.—12 bldgs. at Belle Isle Amusement Pk.	60
EMPORIA, VA.—Plant of Interstate Veneer Co	75
SISTERSVILLE, W. VA.—Riding Acad. & barns of M. J. Brady & Sons	25
VANCOUVER, B. C.—Store bldgs. of Shore Wallace Co. & Radio Specialties, Ltd	75

Apparatus Delivered to St. Ansgar, Ia.—A Nott fire apparatus has been delivered to St. Ansgar, Ia.

Portland Apparatus Hits Street Car—Three firemen were injured when fire apparatus in Portland, Ore., collided with a street car. Passengers in the car were uninjured but badly shaken.

Alta, Ill., Farmers to Buy Apparatus—Alta, Ill., farmers have purchased apparatus for farm protection. It will be housed in town and manned by members of the volunteer department. Its services will be given free to those who contributed to the purchase fund.

New Type Barton Pumps Being Marketed

Two new types of Barton fire department pumps have been placed on the market to make it possible for even small communities to have fire protection equipment.

The pump is attached to the front part of an automobile. The same power unit that drives the automobile operates the Barton pump. It is automatically primed and can deliver two streams at pressures up to two hundred pounds.

Front View of Barton Pump

The C-1 and C-3 types are of the same general design and construction, differing only in the size. Either pump can be driven by a car or truck regardless of the model.

The unit makes it possible to give adequate fire protection for small villages, suburban districts, amusement parks, resorts and isolated institutions. In the smaller communities water can be drafted from cisterns while in the larger cities, the pump can be used as a booster to take water from the hydrant and step up the pressure.

A hand lever starts or stops the pump when the engine is running. The gears are fully enclosed and operate in a bath of oil. The gear box is water cooled from the pump.

The suction opening is located on the center line of the pump at the bottom. It does not interfere with cranking the car. The pump is tapped on both suction and discharge ends for booster tank work.

Bulletin No. 60 has been issued completely describing the Barton pump.

Couple Convicted of Arson Charges

The office of State Fire Marshal S. L. Legreid is credited with the conviction for arson of a woman and her husband in Cook County. After deliberating four hours, a jury in the criminal court returned verdicts carrying penalties of one to twenty years each in the penitentiary against Sam Janows, thirty-eight years old, and his wife, thirty-two years old, the mother of two children.

The case is unusual in that twenty continuances were obtained by the defendants before they finally were brought to trial. The Janows children were in court throughout the trial.

The fire occurred in a delicatessen store operated by the Janows January 16, 1927, at 12:44 a. m. Evidence of firemen was that excelsior was scattered about the store and that there was a strong odor of alcohol. It was proved that Mrs. Janows was the last person seen around the premises before the fire. Insurance of $6,000 was carried on a stock alleged to be worth not more than $2,000.

All Space Taken for I. A. F. C. Convention

Chief August Gerstung of Elizabeth, N. J., chairman of Exhibit Committee, International Association of Fire Chiefs, reports that all exhibit space has been rented for the coming convention in Philadelphia.

The following is the first of concerns that will have displays in the exhibition hall:

Portable Light Co., Berger Mfg. Co., Garrison Fire Detecting System, Inc., Akron Brass Co., Mine Safety Appliances Co., Overman Tire Co., R. D. Wood & Co., C. G. Braxmar Co., American Fomon Co., Schwartz Bros., Harrington-Seaberg Corp., Fyre-Freez Corp., Interstate Coupling Co., Kilsoot Chemical Co., American Magirus Fire Appliance Co., Peter Pirsch & Sons Co., Wheeler-Schebler Carburetor Co., Oxweld Acetylene Co., Pyrene Mfg. Co., Eddy Valve Co., H. Murphy (lunch), Grinnell Co., Larkin Mfg. Co., Lally Fire Appliance Co., Eureka Fire Hose Mfg. Co., Gamewell Co., American-LaFrance & Foamite Industries, Inc., Fire Engineering, Everson-Ross Co., Inc., Bi-Lateral Fire Hose Co., National Foam System, Inc., Seagrave Corp., Mack International Motor Truck Co., Ahrens-Fox Fire Engine Co.

Wellsville, N. Y., Wants Better Fire Alarm—Firemen in Wellsville, N. Y., are registering complaints about the present fire alarm system.

Fire Alarm in Bronx May be Improved—Plans have been submitted to the Board of Estimate, New York City, for the installation of underground fire alarm cables in certain sections of the Bronx. In addition, a fire station will be erected at Eastchester Road and will be completed some time in the fall.

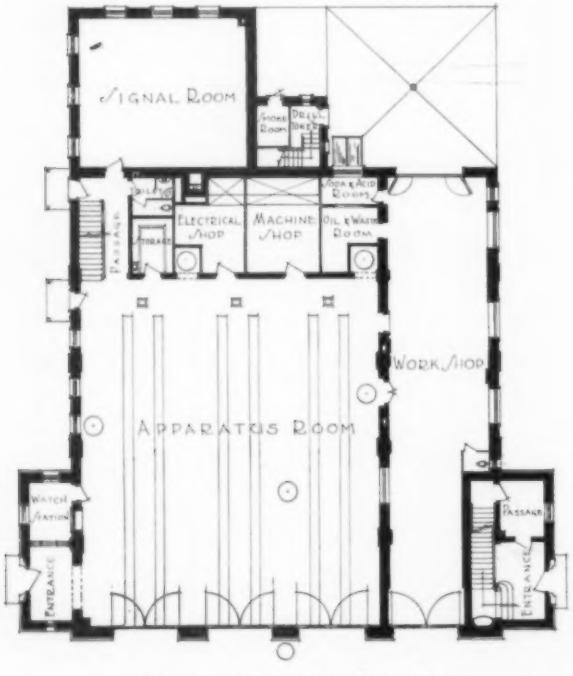
Milford to Have Central Fire Station

Work has commenced on the erection of the new Central fire headquarters at Milford, Connecticut. When this building is completed it will be one of the most handsome and thoroughly equipped fire stations in the state of Connecticut. The building will be located on New Haven avenue in the business district of the town.

The new station will be of fireproof construction, two stories high with a drill tower in the rear. It will be in the Greek revival design of red brick in full range of colors, trimmed with limestone. The new station will be unique inasmuch as it will be the Central fire station and designed for the joint accommodation of the both paid and volunteer fire fighting forces. The fire alarm signal system, all of Gamewell design,

will be located here and also the offices and the rooms of the Board of Fire Commissioners.

In the basement will be located the boiler room, coal bunkers, hose drying racks, battery room, kitchen, dining hall and three bowling alleys. The main apparatus floor is arranged for public entrance where information may be had at the watch station.

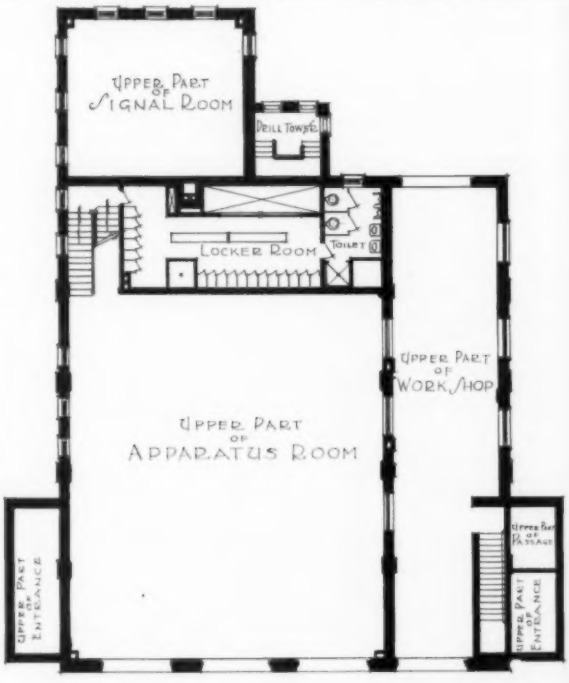


FIRST FLOOR PLAN

This floor will also contain the company's apparatus, a large work shop, small machine room, electrical room, storeroom and station supplies.

Stairs from the apparatus floor lead to the Mezzanine floor which will contain the locker rooms, dressing rooms and wash rooms of the volunteer department and continuing up the stairs to the second story will lead directly to the dormitories of the paid department. The second story will have an entrance from the right side of the building and will lead to a hall from which will be located the chief's office, the commissioners' rooms and the clerk's office.

The second floor will also contain showers and baths, lounge and library and fire officer's rooms. These officers' rooms will



MEZZANINE

SECOND FLOOR PLAN

be fitted with "Murphy" disappearing beds so arranged that they may be folded into a closet and the room used as an office during the daytime. Leonard Asheim, Bridgeport architect, drew the plans for the new station. The building will cost the town of Milford in the neighborhood of $115,000.

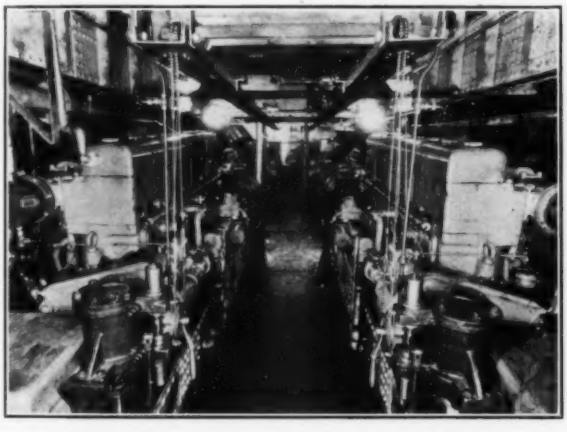
PACIFIC COAST DEVELOPS GASOLINE TYPE FIRE BOAT

West Coast Chiefs Believe This Model to Be Superior to Boat It Has Replaced—Description of Boats Recently Constructed

By CHARLES W. GEIGER

MANY changes in the design of fire boats have taken place along the Pacific Coast during the past few years. It is interesting, in this respect, to note the "Bill Kettner" at San Deigo, Cal., said to be the first gasoline-powered fire boat ever built, and the forerunner of other motorized fire boats now in service at Pacific Coast ports. The gasoline type craft is deemed vastly superior to the model it has replaced. It shows a great gain in economy and efficiency over its predecessor, the steam operated fire boat. The gasoline boat is operated with a smaller crew and of course only burns fuel when it is in action.

The "Bill Kettner" was constructed in 1918, entirely by members of the San Diego Fire Department, who also built the pumps. She is sixty-five feet long, eighteen feet beam, and is driven by a single screw. Her equipment consists of three 220-horsepower engines—an Atlas-Imperial for propulsion and two Seagraves to operate the pumps, which also can be operated by the propulsion engine. The pumps (three centrifugal two-stage) can throw a maximum of thirteen streams simultaneously.



Engine Room in Portland's New Fire Boats
This engine room is typical of the three boats that have been placed in service by Portland, Ore. The photograph was taken looking aft and shows the general arrangement of engines and pumps.

Their capacity is 4,500 gallons per minute. This craft has a speed of ten knots per hour.

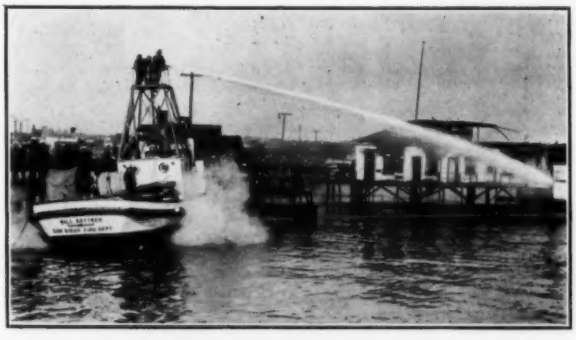
Another boat, the "Alki," was recently put into service by Seattle, Wash. She was built by the Pacific Coast Engineering company at Oakland, Cal., from designs by W. C. Nickum, of Seattle. On her maiden trip up the coast she averaged a speed of eleven knots per hour. Her arrival at her home port was the occasion of a municipal celebration.

To date, at least, the "Alki" is the proverbial last word in motorized fire-fighting craft. Her steel hull is 123½ feet long, 26 feet beam, and she draws seven and a half feet. The power installation consists of seven 300-horsepower six-cylinder Winton gasoline engines—four direct-connected, four-stage centrifugal pumps, two clutch-connected to two four-stage and to the wing propellers, and one to the center propeller. The total capacity of the pumping equipment is 12,000 gallons per minute. In addition, the "Alki" is equipped with carbon-dioxide fire extinguishers, foamite extinguishers of graduated sizes, and carries two tons of foamite powder.

Prominent in this West Coast development is Portland, Oregon. To more efficiently and more economically protect its fast-growing waterfront this city recently discarded two steam fire-boats used for the past several years and replaced them with three gasoline-propelled vessels of the latest type and design.

These boats were designated by A. D. Merrill, naval architect of Portland, and built by the Baker Construction Company, also of Portland. The designer's idea was to create a small boat of sufficient pumping capacity to meet local requirements, and operated by the smallest crew possible consistent with efficiency. Another factor considered was that often delays were experienced in opening the many draw spans on the river bridges—the old fire boats were unable to pass under these bridges until the draws were opened. The new boats were built low and can pass under all the bridges as they stand, save on occasions of extreme high water.

Portland's new fire-boats are triplets; each is eighty-five feet long, beam twenty feet, with a draft of five and a half feet, and a displacement of 120 tons. They are equipped with two 565-horsepower eighty-cylinder Sterling Viking II gasoline engines on propeller drive, developing a speed of eighteen miles per hour. These engines also serve on the pumps. In addition,

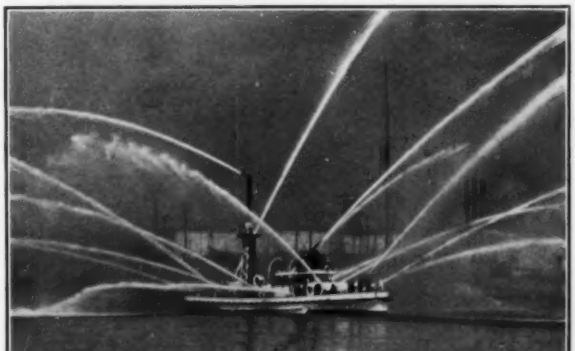


The "Bill Kettner" Fighting a Fire

there are two 425 h.p. six-cylinder Sterling Viking engines direct connected to the pumps. The total pumping capacity of each boat is 9,680 gallons per minute at 200 pounds pressure at the nozzle.

A unique feature of each of these fire-fighters is the method of control—the entire operation of the vessel is controlled from the pilot-house; if necessary, the vessel can be operated by one man. Each boat is equipped with one main nozzle midship and smaller ones fore-and-aft. Each has a fuel capacity enabling it to operate continuously for sixteen hours without servicing. Five men man each boat—two in the engine-room, two on deck, and one in the pilot house. Portland city officials state that these boats are expected to pay for themselves in ten years through the saving in operation cost.

"The City of Los Angeles No. 2" like the "Alki" of Seattle and Portland's three new fire-boats, has a hull of steel construction throughout, save for the fenders, which are of wood. She measures ninety-nine feet lengthwise and has a beam of twenty feet. This boat was built in 1925 by the Los Angeles Shipbuilding & Drydock Company, at San Pedro. Until the "Alki" went into commission a few months ago, Los Angeles City No. 2 was the largest of the Pacific Coast's gasoline propelled harbor fire-fighters. She is powered with seven Winton gas engines,



Los Angeles City No. 2 Giving Exhibition

each of 300 h.p. and two Winton engines, each 25 h.p. One of the 300 h.p. engines is located on the center line aft and drives the center propeller. Two of the 300 h.p. engines are located aft and drive the wing propellers and after fire-pumps. Cut-out couplings are provided so that these engines can be used for driving the after fire-pumps at the scene of a fire. Four of the 300 h.p. engines are direct connected to the forward pumps.

This arrangement provides a total of 900 h.p. for propulsion

when proceeding to or from a fire, giving the vessel a speed of seventeen miles per hour, and the center engine of 300 h.p. is available for maneuvering at the fire when the remaining engines are doing pumping service. The two twenty-five-h.p. engines are direct connected to two fifteen k.w. generators, one of which provides all the electric power required for the steering gear and other auxiliaries, the other being in reserve. There are six eight-inch four-stage multiplex pumps, manufactured by the Byron Jackson Pump Company, Berkeley, Calif.

The fire-fighting equipment includes five monitor turret nozzles, one located on the main deck forward, one on top of the pilot house, two on the main deck aft, and one on top of an electrically operated telescopic water-tower having a maximum elevation of forty-four feet above the water line. Each monitor nozzle is capable of delivering three thousand gallons of water per minute.

There are two hose manifolds on the main deck, one on each side of the dome over the machinery compartment, each having twelve connections for 3½-inch fire hose. There is also a foamite set of three hundred gallons capacity. This equipment is located on top of the dome over the machinery compartment.

Fire hose is carried on four reels, one in the fore hold having a capacity of 1,500 feet of 3½-inch hose, two swiveling reels on the main deck, each holding 1,000 feet of 3-inch hose, and one swiveling reel on main deck, holding 1,000 feet of 3½-inch hose. Storage is provided in the deck house for an assortment of nozzles, an oxyacetylene burning outfit, diving apparatus, smoke helmets, and miscellaneous fire-fighting equipment.

Both electric and hand-steering gear are provided, and the vessel is electric-lighted throughout. A hand operated capstan is provided on the main deck forward for handling lines and anchor-cable.

Fuel is carried in separate steel tanks located in the fore hold and after peak compartment. A water screen of perforated pipe is carried around the top of the deck-house and under the upper fender to protect the vessel when in operation close to a fire.

When necessary, this craft can resort to a novel means of propulsion; she is equipped with four side-propulation jets, two forward one port and starboard, and two similarly located aft. The entire capacity of her pumps may be diverted through these jets below the water-line in order to move the vessel sideways away from a burning dock or vessel.

USE AND ABUSE OF FIRE APPARATUS CONSIDERED BY NEW MEXICO CHIEFS

Annual Convention Held at Socorro—Other Subjects Discussed—Firemen Also Meet

THE sixth annual convention of the New Mexico State Fire Chiefs' Association was held at Socorro, New Mex., on July 27-28, the headquarters and exhibits being in the Hotel Val Verde. The business sessions of the convention were held at headquarters of the Socorro Fire Department. The firemen also held their annual convention at the same time.

It was decided to hold the next convention at Gallup, at a date to be decided later.

Several interesting papers and addresses were listened to and discussed by the members. Among these were "The Use and Abuse of Fire Apparatus," by D. G. Mulligan, of the Mountain States Inspection Bureau, at Denver, Col. Mr. Mulligan also spoke on "The Value of State Firemen's Associations." Among other addresses was one on "The Relationship of the Underwriter to the Fire Department," by F. E. Williams, of the Denver office of the American-LaFrance Foamite Company.

Proposed legislation concerning aid for fire departments, the establishment of the office of state fire marshal, and uniform building and inspection codes were discussed. Committees were appointed to get the matters before the next legislature.

The convention was the guest of the Socorro Business Men's club at a banquet in the Val Verde Hotel. On the evening of the 27th an entertainment was given and brief addresses were delivered by a number of local and visiting members.

Demonstrations of the foam generator occupied a great part of the afternoon of the second day. The Socorro Hose Company gave a pumping demonstration and the rest of the evening was devoted to drives to points of interest. The convention ended with a smoker given by the members of the Socorro Fire Company.

The following officers were elected:

P. D. Miller, Socorro, president.
F. N. Beatty, Clayton, first vice-president.
F. J. Ambrose, Gallup, second vice-president.
Theodore A. Rosenwald, Albuquerque, secretary-treasurer.

Among the exhibitors were the American-LaFrance Foamite Company, Denver Office; Eureka Fire Hose Manufacturing Company, Denver Office; Carpenter Manufacturing Company, Boston, and Fire Engineering.

Among those present at the convention were:

Socorro, N. M.—P. D. Miller, Chief; J. B. Woods, P. A. Camperdon, W. E. West, Leo Fay, B. R. Britton, John Greenwald, T. H. Liles, Phil Stackpole, C. J. Hammel, C. H. Fowler, J. H. Linder, J. L. Stackpole, L. H. Becker, Jim Stackpole, M. M. Smith, Bob Lewis, Percy Sickles, J. M. Hunter, Geo. Keith.
E. Las Vegas, N. M.—J. B. Brown, Chief; C. W. Phillips.
Clayton, N. M.—F. H. Beatty, Chief.

Photos, Courtesy, Theodore A. Rosenwald, Secretary

Annual Convention of the New Mexico State Fire Chiefs' Association, at Socorro, July 27–28. Upper — Exhibit by Eureka Fire Hose Manufacturing Company. Center and Lower— Some of the Chiefs and Others Present at the Convention

Deming, N. M.—R. H. Hughes, Chief; D. E. Hathaway, Capt.
Belen, N. M.—W. E. LeBrun, Chief; W. Goebel.
Hot Springs, N. M.—J. Tafoya, Capt.; H. A. Whittaker, Assistant Chief; C. Phillips, Secretary; G. W. Caldwell.
Gallup, N. M.—J. T. Smith, Secretary; F. J. Ambrose, Treasurer; H. P. Elston, F. D. Hight.
Denver, Colo.—F. E. Williams, Am. LaFrance & Foamite Co.; D. G. Mulligan, Mt. States Insp. Bureau.
Albuquerque, N. M.—T. A. Rosenwald.
Magdelina, N. M.—Tom Butterfield, Chief.
Albuquerque, N. M.—J. E. Wickham, Chief, A. T. & S. K. Ry. Co. Shops.

South Bend, Ind., Buys Apparatus—South Bend, Ind., has purchased a Boyer apparatus for $5,490.

Milan, Ohio, Remembered by Edison—Milan, Ohio, the birthplace of Thomas A. Edison, has been remembered by the inventor. He sent a check for $1000 to be used in purchasing new fire apparatus.

FIRE FIGHTING IS HEREDITARY AMONG NEW YORK OFFICERS

Sons Follow in Their Fathers' Footsteps and Disprove an Old Saying—Policemen Who Have Become Fire-Fighters

RECENTLY in New York City sixty-one firemen were appointed on probation. Thirteen of them were policemen, who, having gained a place on the eligible list for fireman, decided to forsake the "bluecoats" for the "blueshirts." One of the advantages or attractions is the possibility of earlier retirement. Policemen have to serve 25 years; a fireman only 20 years. One in twelve firemen is promoted to a lieutenancy. Both positions pay the same, $2,500 a year. The number of firemen who accept appointment in the police department is negligible. The number of policemen who accept appointment in the fire department is a testimonial to the fire service.

Another advantage is the recently enacted municipal law which credits firemen on their service records with the time they served in the police ranks. In other words, a policeman "on the force" five years, and having taken at about the same time that he took the police test, the examination for the fire department calculates that with those five years credited to his record, he will have only fifteen years to serve in the fire department.

Appointment of John Davin

One of the young men appointed to the fire department on July 23 last was John Davin, son of Deputy Chief John Davin, in charge of the fire forces in the Boroughs of Brooklyn and Queens. Mr. John Davin at the time of his appointment was a successful business man, engaged in the printing and stationery business. He took the examination without his father's knowledge. The elder Davin, one of the department's ranking officers, a disciplinarian and a fireman with an exemplary record, was in a quandary, but he let his only son choose his own course. If the junior turns out to be nearly as successful and efficient a fireman as his father, his career will not have been in vain. And, to start the youngster off in the right direction, Chief Davin asked Chief Kenlon to send the young man to the busiest hook and ladder company in the Ghetto of Brooklyn. This was done. He went to H. &. L. Co. 120 in the Brownsville quarter, where the company averages 150 runs a month.

Chief Davin's action is typical of other fathers of firemen-sons. "Big Tom" Larkin, chief in charge of the Drill School, has a "boy" in Rescue Co. No. 1. Assistant Chief Joseph B. Martin is the father of Lieut. Joseph Martin, of H. & L. Co. 3, detailed to his dad as aide and chief of staff. Assistant Chief Thomas F. Dougherty has a son in one of the busiest engine companies in Harlem, where they average at least 120 runs a month. Battalion Chief John E. O'Keefe has a son in a busy company in the Bronx. Batt. Chief Francis J. Gray has a "boy" in H. & L. Co. 14 on East 125th Street, where he is assigned to drive the chief of the 12th Battalion, averaging 150 runs a month. Batt. Chief Edwin A. A. Quinn in the 6th on East 13th street has his son driving him, and kept busy most of the time.

There are others—scores of them—following father's foot steps and they disprove the oft repeated assertion: "My boy will never be a fireman." Perhaps the most successful son of a fireman (in the New York Department at least) is Deputy Chief George L. McKenna, whose father was a smoke eater. Chief McKenna is president of the Chief Officers Association and the Inspecting Officer of the department in the matter of uniforms.

Other Family Enlistments

The Cashman family is another: Capt. Frank of Engine Co. 71, Lieut. William, of Fire Patrol No. 6 and Assistant Fire Marshal John, sons of the late Deputy Chief John J. Cashman, in his heyday a famous blaze beater.

Battalion Chief William Purdy's father was a fireman. Recently when Battalion Chiefs were ordered to make a survey within their district and check up on the domestic status of firemen's widows on the pension rolls, it fell to Chief Purdy to make an official visit to his mother, who still resides in his battalion district, ask her the formal questions and then certify that he investigated her civil condition and then swear that he ascertained that she is still a widow, etc. Mother and son had quite a laugh over the formality. Chief Purdy is now the Acting Deputy Chief assigned to the Marine Division.

Another family well represented in the department is that of Deputy Chief Patrick Maher of Brooklyn. His two sons are firemen, one of them recently having forsaken the police ranks where he served seven years. The other young man, Edward, is detailed as chauffeur to the Fire Commissioner's car, an assignment he has had since he entered the department ten years ago, having been a mechanic in the F. D. Repair Shops prior thereto.

WM. JEROME DALY.

PORT CHESTER EXCELS NEIGHBORS IN FIRE FIGHTING FACILITIES

New York Village Has More Apparatus Per Capita Than Cities and Towns in Vicinity —Comparison in Men and Apparatus

WITH an estimated population of 22,210 persons, the town of Port Chester, N. Y., surpasses any other community in Westchester County and in Fairfield County, Conn., in strength of fire-fighting equipment and apparatus figured in proportion to per capita population. According to a survey recently completed Port Chester's fire apparatus is equal in strength and numbers to that of White Plains, with a population of 29,215, and Stamford, Conn., with a population of 40,800.

The city of Yonkers, N. Y., with a population of 117,500, more than five times that of Port Chester, has but nineteen pieces of actual fire-fighting equipment as against Port Chester's eleven; and New Rochelle, although more than twice as large as Port Chester, also has but nineteen pieces of apparatus. Figuring on the basis of comparative populations, Port Chester equals White Plains and Stamford and surpasses Yonkers and New Rochelle.

There are twelve pieces of motorized fire fighting apparatus in the Port Chester Fire Department. Of this number five are quartered at Westchester avenue fire headquarters; one American-LaFrance pumper with auxiliary unit attached, capacity 500 gallons; two aerial ladder trucks, one a modern Mack piece of apparatus and the other an older White ladder, powered with a Knox tractor; one straight chemical with a capacity of 200 gallons.

At the Washington Park fire station there is a 1,000-gallon Ahrens-Fox pumper and one White hose wagon. The Putnam steamer company boasts a 750-gal. capacity steamer, one hose wagon and a new 1,000-gal. American-LaFrance pumper recently purchased by the officials in that community. Brooksville and the Mellor Hose Company each have an American-LaFrance pumper with auxilliary attachments, 500 gallons capacity.

The only factor in which Port Chester fails to vie with its larger neighboring communities is in the number of paid men on its fire department force. There is only one paid member of the department. Despite this fact, however, there never has been an instance in the history of Port Chester where lack of men or drivers has handicapped the department in an emergency. The total enrollment of volunteer firemen in the Port Chester department is 320 men at the present time—within forty-six of the total number of paid men at Stamford, White Plains, Yonkers and New Rochelle, all together.

An exact idea as to how Port Chester compares with these other communities in strength of fire fighting equipment may be had from the following figures:

White Plains boasts 10 pieces of apparatus as follows: five pumpers, three ladder trucks, one chemical and one emergency truck. That city also has one line service truck and a chief's car. There are 45 paid men in the White Plains department. The population of that city is 7,000 more than Port Chester and despite this larger size, that city has less pieces of apparatus than Port Chester.

The city of Stamford has the same number of pieces as White Plains. They are as follows: four 750-gal. pumpers, two triple combinations, one 75-foot aerial ladder, one city service truck for emergency work and two chemical and hose wagons. The department has 68 paid men.

New Rochelle, with a population of 48,315, has 98 paid men and 19 pieces of apparatus as follows: seven pumpers, six with 750-gal. capacity and one of 1,000-gals.; four hose wagons, four chemicals; three ladder trucks and one emergency truck.

Yonkers has 155 paid men and the same number of pieces of fire apparatus as New Rochelle, 19 as follows: 13 fire engines, pumpers, hose wagons and chemicals; four ladder trucks and two emergency ladder service trucks. The department there also owns one chief's car, two assistant chief's cars and a line repair truck.

T. F. MAGNER.

Vote of Confidence Extended Chief Baird—Without a dissenting voice, the council of Santa Barbara, Cal., extended a vote of confidence to Superintendent Thomas Baird, the new head of the fire department.

FIRE DEPARTMENT ACTIVITIES

Geneva, Ohio, to Buy Truck—A new fire truck is to be purchased by the Geneva, Ohio, Fire Department.

Hatboro, Pa., to Have New Pumper—The Enterprise Fire Company, of Hatboro, Pa., will soon purchase a small pumper.

Peekskill, N. Y., has New Fire Siren—A new fire siren has been installed at Peekskill, N. Y.

New Fire Company for Ambridge, Pa.—The South Heights Volunteer Fire Company has been organized in Ambridge, Pa.

Sioux Rapids, Ia., Has New Apparatus—A Nott fire apparatus will soon be delivered to Sioux Rapids, Ia.

Lexington, Ky., to Have New Fire Station—Plans will be drawn for a new fire station to be erected in Lexington, Ky.

New London, O., Buys Pumper—New London, Ohio, has purchased a Deluge pumper.

Chardon, Ohio, Raising Funds—A fund is being collected in Chardon, Ohio, for the purchase of fire apparatus.

New Station Opened in New Castle, Pa.—The new fire station in New Castle, Pa., has been formally opened.

Rising Sun, Pa., has Parade and Carnival—A parade and carnival was held late in July by the Rising Sun, Pa., Volunteer Fire Department.

Camden, Me., Proposes to Buy Pumper—The Fire Department of Camden, Me., will probably soon purchase a triple combination apparatus.

E. Islip, N. Y., Opens Headquarters—The fire headquarters in East Islip, N. Y., has been opened for public inspection.

Winona, Minn., Firemen Get Increase—Firemen of Winona, Minn., have been granted a pay increase of five dollars a month. Thirty-five firemen will be benefited.

Troy, N. Y., Station Nearly Completed—The new fire station being erected in Troy, N. Y., is nearly finished It will be known as the Charles Eddy station.

Sheboygan, Wis., to Have New Station—Construction has started on a fire station in Sheboygan, Wis. The building will cost $28,300.

Atlantic County Unit Meets—The chief's unit of the Atlantic County Firemen's Association met in Ocean City, N. J., as the guests of Chief Conver.

E. McKeesport, Pa., Raising Funds—Firemen of East McKeesport, Pa., are raising funds for the purchase of fire apparatus.

Syracuse, N. Y., to Erect Fire Stations—Three lots have been purchased in Syracuse, N. Y., on which to erect a fire station.

New Cumberland, Pa., to Erect Station—A new fire station will be erected in New Cumberland, Pa., on the site of the station now being occupied by the Enola company.

Marion, O., Opens Bids—Marion, Ohio, has opened bids for the purchase of fire apparatus. No contract has been awarded as yet.

New Fire House Opened in Riverside, N. J.—Members of the Delran Fire Company No.2 celebrated the opening of the new station at Riverside Park, N. J., by a chicken supper.

Camden, N. Y., Changes Companies—The two hose companies in Camden, N. Y., have been abandoned and a new engine company will be organized to care for the apparatus.

Newburyport to Centralize Apparatus—Mayor Gillis of Newburyport, Mass., intends to do away with all horse-drawn apparatus and to centralize the equipment in one station.

Willard, Ohio, to Have Combination House—The Council of Willard, Ohio, will purchase a lot to erect a building for the purpose of housing the fire apparatus and other city property.

Apparatus Delivered to Atascadero, Cal.—Fire equipment mounted on a Reo chassis has been delivered to Atascadero, Cal. Steps will be taken now to organize a volunteer fire department.

Harrison, Pa., to Buy Apparatus—Harrison Township, Pa., has invited bids for the purchase of two pieces of motorized fire apparatus. The town will buy either a 750 or 1,000-gallon pumper, and a ladder truck.

Gillis, Chief of St. Cloud, Minn.—John J. Gillis, member of the St. Cloud, Minn., fire department for twenty-five years, has been made chief of the department. He succeeds Thomas Lacher who has resigned.

Biddeford Firemen Dine Council—Firemen of Biddeford, Me., arranged a testimonial banquet for the city council for their cooperation in the purchase of a 1,000-gallon pumper. Abount one hundred persons were present.

New Fire Alarm Planned for Sioux City—A new fire alarm system has been planned for Sioux City, Ia. The part in the down town section will be placed underground in the telephone company's underground circuit.

Survey Made of Gasoline Tanks in Johnstown—All service stations and garages in Johnstown, Pa., were ordered by Chief Harry Schultz to conduct pressure tests to see if there were any leaks in the tanks or pipe lines.

Insurance Company Provides Fire Protection—The Vernon Mutual Fire Insurance Company, which is a farmers' mutual concern, has purchased a Barton pump, and mounted it on a fire truck chassis, to protect the community of Tess Corners, Wis.

South Gate, Cal., to Have New Unit—The Home Gardens Fire Department will be turned over to South Gate, Cal. Practically the entire Home Gardens section is now within the limits of South Gate. The Home Gardens unit has been under the Los Angeles County Fire Department ever since its inception.

Firemen Brave Palisades for Dog—North Bergen, N. J., firemen braved the Palisades to rescue a dog that had fallen over the cliff and landed on a ledge 265 feet from the ground. Two firemen lowered a comrade, by means of a rope, to the ledge, and the animal was rescued.

Pennsylvania Firemen to Meet in Ebensburg—At the annual convention held in Clearfield, the Central district of the Pennsylvania Firemen's Association voted to hold the 1929 convention in Ebensburg. The firemen will meet some time during the Cambria County exposition.

Providence, R. I., to Have New Station—It is expected that the new fire station being erected in Providence, R. I., to house a pump and a ladder company, will be completed some time in November. The board of Aldermen have appropriated $13,000 for the purchase of apparatus.

Williamsport, Md., to Have Department—Plans are under way for the organization of a fire department in Williamsport, Md., a short distance from Hagerstown. With completion of the water system, the town will have ample water for the use of fire apparatus.

Public Garage Closed as Fire Menace—A public garage in the basement of Dreamland Auditorium Building, San Francisco, was closed by the actiort of the Fire Marshal of that city. A fight program was arranged in the building above the garage, and the Fire Marshal decided the use of the public garage violated a city ordinance.

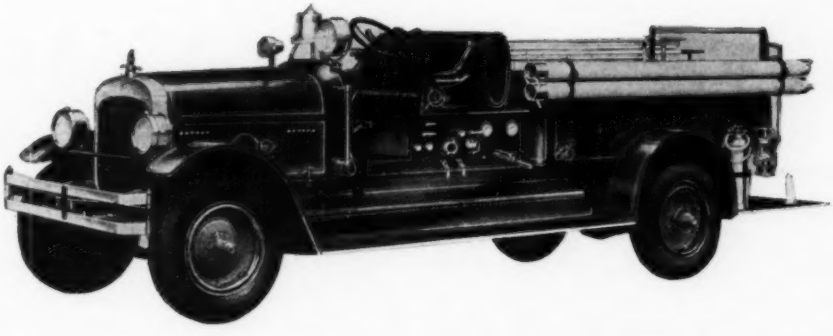
Fire House to be Erected at Rockaway—Commissioner John J. Dorman has let contracts for the contraction of a fire house at Beach 58th St. and the Boulevard, Rockaway Beach, L. I. The building will be two stories high, with tapestry brick and limestone front. A new truck company may be formed and housed in the new station when completed.

Station Planned for Poughkeepsie, N. Y.—A committee from Poughkeepsie, N. Y., in company with Chief Noll and the architect, have been inspecting fire stations in New York City to obtain ideas to be incorporated in a fire house that will be erected in Poughkeepsie. The building will have a fifty-foot hose drying tower. The house may be modeled after a station in Brooklyn.

Berkeley, Cal., Wants to Enlarge Department—Chief George Haggerty, in his annual report, has asked for a number of improvements for the department. They include changes in the fire alarm system, erection of a new fire station and the purchase of a pumper for it, purchase of a ladder truck for protection of the business district, purchase of a pumper for replacement, and a new car for the chief.

Firemen Saves His Life, So he Joins—A year ago when stricken with double pneumonia, the inhalator crew of the Richmond, Cal., fire department kept a young man in that city alive more than ten hours. He revived. The man, a restaurant owner, has given up his business and taken the examination to join the department. He is now eligible for an appointment when a vacancy occurs.

Safeguarding Industries and Institutions - - -



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Bureau of Mines Issues Hazard Film

As a means of reducing the heavy annual death rate caused by carbon monoxide, the United States Bureau of Mines, Department of Commerce, has completed a one-reel educational motion picture film entitled, "Carbon Monoxide: The Unseen Danger." This film, prepared in cooperation with one of the large automobile manufacturing companies, shows vividly how this deadly gas may be encountered in workshop, garage and home, points out ways of preventing accumulations of the gas, and vizualizes methods of reviving victims of the gas.

A series of bold, black newspaper headlines flashed upon the screen impresses the fact that each year many hundreds of people are killed in the United States by carbon monoxide, the colorless, odorless and tasteless gas which gives no warning of its stealthy approach.

The early scenes of the film show a man preparing to run his automobile out of the family garage. As he is starting the engine, the doors of the garage blow to. While the engine of the car is warmed up, the carbon monoxide fumes in the exhaust gases affect the unsuspecting driver, who presently topples over unconscious. The family, waiting for the car, become uneasy over the delay, and the son, a boy scout, is sent to investigate. The boy, finding his father prostrate, applies his boy scout training by dragging his father to the open air and immediately starting artificial respiration. A doctor is summoned and the local fire department rushes to the scene with an oxygen inhalator. By the application of these prompt measures, the man's life is saved. Other instances of exposure to carbon monoxide fumes in closed garages in which the victim is not so fortunate are, however, shown. "Never run the engine in a closed garage!" and "Keep the doors wide open!" are the warnings thrown upon the screen.

Other scenes portray the hazards from carbon monoxide likely to be encountered in repair shops and service stations. A heedless mechanic, starting to get beneath a car while the engine is running is jerked back to safety with the admonition "Never get under the car while the engine runs!" Headaches and half-sick conditions are often due to the presence of carbon monoxide in garages and service stations, the film points out. Methods of proper ventilation of such places are shown.

Other scenes show how the mother and the children in the home may unwittingly be exposed to the dangers of the treacherous gas. A short series of views shows how the children playing with their toys are suddenly affected by fumes escaping from a defective gas heater and how the mother and the children at luncheon are attacked by carbon monoxide when, in the kitchen beyond, the coffee pot boils over, extinguishing the gas and thus liberating the carbon monoxide fumes present in the flow of unburned gas from the stove. "Never sleep in a room with a gas appliance burning!" is another warning flashed.

This educational motion picture film is now available for showing by schools, churches, clubs, civic and business organizations, miners' local unions and other bodies. Copies may be obtained from the Pittsburgh Experiment Station of the United States Bureau of Mines, Pittsburgh, Pennsylvania. No charge is made for the use of the film, but the exhibitor is requested to pay transportation charges.

All Fish Are Not in the Sea

Firemen who work around pumpers know that it is possible for fish to find their way into city water mains and to later clog the strainers used as a safeguard on pumper intakes.

While making fire flow tests in Chicago, engineers of the Factory Mutual discovered some interesting facts. A 1,500-gallon and a 1,000-gallon centrifugal pump at the buildings of the Central Manufacturing District take suction from the city mains. Running at full speed, the larger pump delivered only 996 gallons a minute at a pressure of forty-two pounds instead of 1,500-gallons or better at one hundred pounds pressure. The suction line, normally under 24-pound pressure, showed an 18-inch vacuum. The results suggested some obstruction either in the meter or the fish trap on the pipe leading from the street main.

When the cover was removed from the fish trap, the screen was found closely matted with fish, mostly dead and mutilated, but a few still alive. The largest was twelve inches long. These fish were perch and when small had probably been drawn from Lake Michigan through one-half inch screens and through the city pumps into the mains. There they grew and lived until sucked into the screen.

The fish were removed and the Factory Mutual engineers conducted a second test. This time they obtained 1,680 gallons a minute at 120 pounds pressure and the suction dropped only two pounds. The suction screen on the smaller pump was found similarly obstructed and small pieces of fish had been drawn into the meter. The second pump, as well as the first, gave a satisfactory test after the fish trap and meter were cleaned.

Booklet Issued on Resuscitation Work

A booklet which may be of interest to fire department officials has been issued by the National Electric Light Association on "First Aid and Resuscitation in Gas Poisoning, Electric Shock and Drowning." In small quantities, the booklet is supplied at ten cents each.

Various types of first aid work are treated in a manner that is not difficult to understand. The following is printed on the use of inhalation to drive carbon monoxide out of the blood:

"In gas poisoning, oxygen used properly, helps to drive the carbon monoxide from the blood. To do any considerable good, the oxygen must be given during the first two hours after the man is out of the gas—the sooner the better. Sometimes the patients do not breathe well after they are brought out of the gas. In fact, some stop breathing entirely. Even those who breathe normally often can not get the gas out of their blood fast enough to prevent their being very sick or even dying afterwards. For this reason it is recommended that about five per cent of carbon monoxide—which is the gas that is used in soda water—be mixed with the oxygen. This makes the patient breathe much more deeply and thus allows the oxygen to drive the carbon monoxide out of the blood very rapidly. The carbon dioxide also keeps the breathing from stopping. It starts breathing more quickly in those on whom it may be necessary to do artificial respiration. It is useless to try to give an inhalation with a tank and funnel or any such makeshift. A properly designed inhalator and close fitting mask must be used.

"Put the mask over the patient's face. The lower part should go well down on the chin. Press down firmly over the nose. Try to prevent leaks.

"As soon as the mask is properly applied, adjust the apparatus to give the patient an ample supply of the oxygen-carbon dioxide mixture. Continue the inhalation for twenty to thirty minutes or longer, depending upon the severity of the case."

CONVENTION DATES

Aug. 22-24—VIRGINIA STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention, Ocean View, Va. Secretary, Chief J. B. Gordon, Newport News, Va.

Aug. 28—MICHIGAN STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Fordson, Mich. Secretary, George F. Dansbury, Grosse Pointe Farms, Mich.

Aug. 29-31—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 6th Annual Convention. Reading, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Street, San Diego, Cal.

Aug. 29-31—INDIANA FIRE CHIEFS' ASSOCIATION. Annual Convention, Fort Wayne, Ind. Secretary, Chief Ezra D. Owens, Fire Department, Bedford, Ind.

Sept. 4—NEW HAMPSHIRE STATE FIREMEN'S ASSOCIATION. 31st Annual Convention, Colebrook, N. H. Secretary, Oscar P. Stone, 312 Manchester St., Manchester, N. H.

Sept. 5-6—COLORADO STATE FIREMEN'S ASSOCIATION. 12th Annual Convention and Tournament, Rocky Ford, Col. Secretary, Clinton Turnbull, 303 Jacobson Bldg., Denver, Col.

Sept. 10-11—ARKANSAS STATE FIREMEN'S ASSOCIATION. Annual Convention, DeQueen, Ark. Secretary-Treasurer, H. D. Compton, Central Fire Station, Little Rock, Ark.

Sept. 11-13—ILLINOIS FIREMEN'S ASSOCIATION. 41st Annual Convention, LaSalle, Ill. Secretary, Roy W. Alsip, Asst. Chief, Fire Department, Champaign, Ind.

Sept. 18-19—IOWA FIREMEN'S ASSOCIATION. 51st Annual Convention, Independence, Ia. Secretary, E. E. Parsons, Marion, Ia.

Sept. 18-20—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Hotel Nichols, Haverhill, Mass. Secretary, Daniel J. Looney, 1043 Old South Bldg., Boston, Mass.

Sept. 21-22—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 51st Annual Convention, Atlantic City, N. J. Secretary, William Exall, Chamber of Commerce Bldg., Newark, N. J.

Sept. 21—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Annual Meeting in evening, Atlantic City, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

Oct. 1-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Uniontown, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 1-6—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention and School of Instruction for Firemen, Sacramento, Cal. Secretary, State Fire Marshal Jay C. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.

Oct. 9-10—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Ray Tiller, Warterloo, Ia.

Oct. 9-11—RAILWAY FIRE PROTECTION ASSOCIATION. Annual Meeting, place to be selected later by Executive Committee. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

Oct. 11-12—GREAT LAKES ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Frank C. McAuliffe, Chief of Patrols, 100 Desplaines St., Chicago, Ill.

Oct. 15-17—EASTERN ASSOCIATION OF FIRE CHIEFS. (Eastern Division, I. A. F. C.) First Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. (Just preceding I. A. F. C. Convention.) Secretary, T. Howell Johnson, Room 602, Chamber of Commerce Bldg., Newark, N. J.

Oct. 17-20—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. Exhibits at Second Regiment Armory. Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibits, Chief August Gerstung, Elizabeth, N. J.

Oct. 22-24—KANSAS STATE FIRE CHIEFS and FIREMEN'S ASSOCIATIONS and WOMEN'S AUXILIARY. 13th and 42nd Annual Conventions and 3d Meeting, respectively, Liberal, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

FALSE ALARMS

—Drawing by "Art" Espey

It's Not the Heat But the Ice That Worries the Firemen

Some kind soul in an Indiana city saw firemen troubled by the heat, go across the street to buy ice cream sodas or "what have you" to keep cool. He thought it strange that firemen who are so liberal with water should not have nice cold water for their own use. So he purchased water coolers for all the city fire stations. The firemen appreciated it and were not backward in telling the good Samaritan so. Now that the stations have water coolers, the problem is where will the ice come from? It is charitable for ice wagons to park near fire stations when making their daily deliveries, for ice must be provided in some way.

AN OLD SHOW

This is an age of efficiency. It has even affected the type of person that generally leans over the rail to watch an electric drill at work.

One day smoke appeared in the sky. There was the noise of approaching fire apparatus.

"Oh dear," said the man, "I hope that it is not the big building on the corner again. It's twice that I've seen that building on fire."

The modern equivalent of locking the barn door after the horse has been stolen is blowing out the match after the gas tank has blown up.

HE MEANT WELL

A more or less shiftless resident of the section had the job of tending the furnace at the fire station, and doing other odd jobs about the building to occupy his time. One day he went up to the chief and gave some excuse to get the day off.

The next day the chief was indignant. He said:

"You're dishonest. You took a day off yesterday to bury your mother-in-law and I saw her this morning as I was driving down to the station."

Without stopping to think, the handy man replied, "Pardon me, I did not say that she was dead. I only said that I would like to go to her funeral."

Marriage is a game of give and take. What you don't give, she takes.

ONE STEP TOO MANY

"See that fellow over there?"

"You mean the one with his leg bandaged?

"Yeh, that's him. That fellow had a streak of bad luck. At the Market street fire, he fell down into the cellar. He slid down fourteen steps, and just his ill luck, he had to go and break his leg on the last step."

JUST WHAT HE SAID

There was very little doing at the station that morning. The desk man called to a friend and said:

"Hey Jim! Watch this desk for a while. I'm just going out for a second."

After what seemed an unreasonably long time, the voyager returned.

Jim shouted, "I thought you were going out for a second."

"That's right," was the reply, "and I've just had it."

HIDDEN AWAY

The fire department was subjected to its annual physical examination and Tom McCarthy was told to step aside. He needed medical treatment. It was a forelorn Tom that went home that night. His wife recognized that something was wrong.

"What's the matter, Tom" she asked, "did the chief catch you drinking again?"

"Not this time. The doctor examined me down at the station and said I had ad'noids."

"What's that?" asked Mrs. McCarthy.

"They're the things in your head that has to be taken out," answered Tom.

"That's a lie!" said his wife angrily, "cause every time yez wash yez head, I fine comb it, and never an ad'noid did I find."

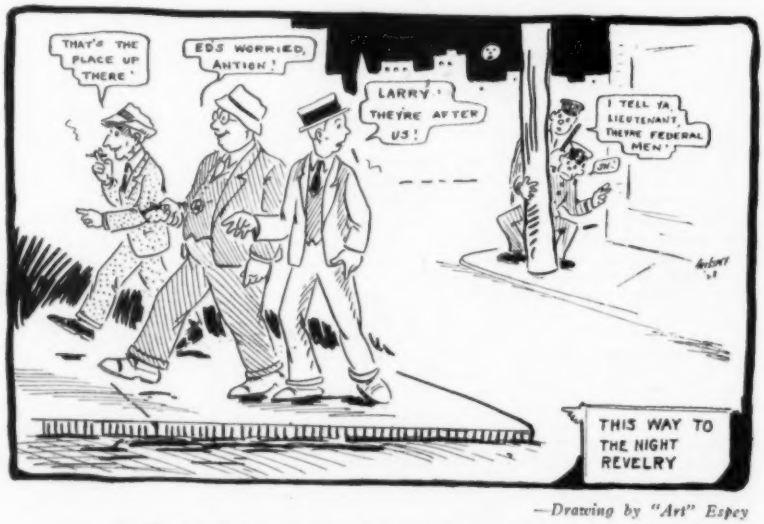
They call her Siren because she is a scream.

COMPLETELY EQUIPPED

The *Clarion* reporter paused for a few moments at the fire station to hear any possible gossip. He smiled as he listened to some music coming from the firemen's recreation room.

"Ah! So you fellows have a new radio."

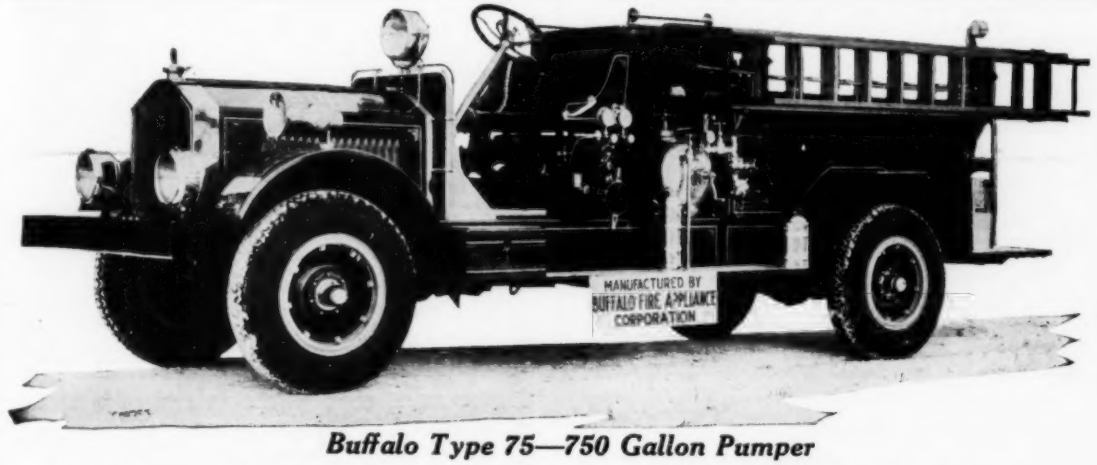
"Radio, nothing," replied the man on the apparatus floor, that's the tillerman singing up stairs."


THAT'S THE PLACE UP THERE!
EDS WORRIED, ANTION!
LARRY! THEYRE AFTER US!
I TELL YA LIEUTENANT, THEYRE FEDERAL MEN!
THIS WAY TO THE NIGHT REVELRY

—Drawing by "Art" Espey

Elmira Policemen Just Seem to Know Everybody

There are three men who today know that they don't look like firemen. They are Antion Holterback, president and "Larry" Gorman, vice-president of the Uniformed Firemen's Association, both of New York City, and Eddie Chapman, New York state vice-president of the I. F. F. A. Shortly after they registered at the hotel in Elmira, N. Y., they decided to see what the city offered in the way of excitement. They headed for the Queen City's Night Palaces. They had not gone far before they were stopped by the guardians of the law who wanted to know where they were going. The firemen appreciated such interest. They were surprised, however, when they learned that they were mistaken for Federal men. Larry says that he doesn't mind the mistaken identity but he is wondering whether his chances are just as strong with "Al" Smith.



Buffalo Type 75—750 Gallon Pumper

The above 750 Gallon Triple Combination Chemical and Hose Car is in service at the United States Veterans' Hospital which is located at Northport, L. I., and is safeguarding the lives of many of our boys who served in the World War against the world's greatest hazard, which is FIRE.

IF YOU WANT SOMETHING BETTER, BUY *"BUFFALO"*
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Manufacturers of all types of Fire Apparatus

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Salvage Covers

"SHUREDRY" Covers stand the gaff. They give unfailing satisfaction — *always* . . . as proof of which, read what Chief Cody of the Atlanta Fire Department has to say of them:

"We have been using 'Shuredry' salvage covers in the Fire Department for a period of twenty years, or more, and have received wonderful service from them. It is my opinion that your covers are superior to any on the market.

"It is with pleasure that I recommend your product to anyone desiring service and satisfaction."

Cost less, weigh less, and easier to handle and spread than rubber covers. Do not crack when folded and left on shelf.

Write for sample and price.

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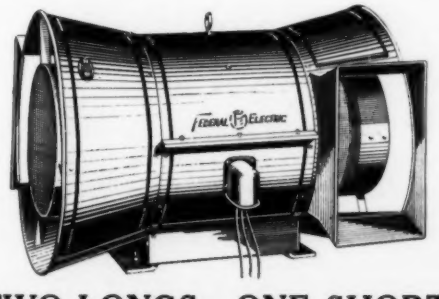

TWO LONGS—ONE SHORT! MEANS "MAIN STREET"

Fire chiefs, firemen, councilmen, and townspeople know the fire is on "Main Street" when a Federal coded fire alarm shrieks out the signal—"2 longs—1 short."

A Federal signal knows no competition in bells or gongs for the piercing, penetrating bellow of a Federal tells clearly where the fire is.

Hundreds of towns, now using a Federal Full Automatic system, know how little it costs to add call boxes and new signals to new sections, as their town grows.

Write today for complete specifications, or estimates, without obligation.

POINTS OF COMPARISON

1. Both horns are entirely screened. This prevents the entry of rubbish and the nesting of birds in the horns.
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3. Winged nuts and hinged cover make the motor easily accessible.
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5. Bright red Duco finish gives the siren a handsome, durable appearance.
6. Pressed steel—not cast iron—is used for the base.
7. The air guard may be adjusted to direct the sound in any direction—a patented feature found on no other make of siren.
8. Fifteen-inch, cast aluminum rotors.
9. Eye-bolt for hoisting.

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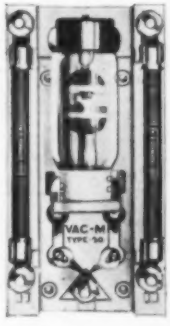
Intact Equipment
Peace of Mind—

because VAC-M Arresters protect against static, sneak current cross and kindred electrical disturbances as well as lightning.

Equip one circuit this year and be convinced.



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Toledo, Ohio

New Victor Gas and Fume Mask

Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment.

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Complete Automatic Spring Outfits for Doors Opening In and Out. Used throughout the world. Once on the doors your door opening troubles cease. They last a lifetime. Send for Bulletins.

THE BLANCHARD "FLEXI-COT"

provides for speedy yet safe humane handling of the injured.

Quick, safe handling of the injured may save a life or prevent lifelong disability. The BLANCHARD FLEXI-COT is the apparatus approved and adopted by well-equipped departments.

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Light and Heavy Hook and Ladder Trucks.
Miscellaneous Fire Fighting Equipment.
Fire Department Ladders.

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Erick Sirens do not clog up. Snow and ice cannot enter and stop sounding rotor. Completely protected and sheltered from outside influences.

Features That Prove Supremacy

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Every telephone is a fire alarm station, permitting operator to sound alarm instantly, giving your fire department a chance to get the jump on the fire.

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The Erick Sound Rotor and Deflector is built to instantly send a Fire Alarm.

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PROPOSED IMPROVEMENTS

Cowpens, Spartanburg Co., S. C.—A new fire station is being planned here. Address Town Council.

Fennville, Allengan Co., Mich.—Village Council voted to purchase a fire alarm siren, according to reports.

Berrien Springs, Berrien Co., Mich.—Village Council to hold a meeting to discuss purchase of fire apparatus for rural use.

Mt. Vernon, Westchester Co., N. Y.—Reports state plans are under way to submit a referendum at election in November on the construction of a new fire headquarters building to house the signal system and at least five of the new fire companies.

Poughkeepsie, Dutchess Co., N. Y.—A fire station is to be erected in the Eighth Ward, at cost of $50,000. Chris W. Noll, Chief of Fire Dept.

Manlius, Onondaga Co., N. Y.—Agitation has been started here for purchase of new fire apparatus. Leslie Meyers, Chief of Fire Dept.

Williamsport, Lycoming Co., Penn.—City Council has approved a bond issue of $100,000 for construction of a new fire station.

Charleroi, Washington Co., Penn.—The North Charleroi Fire Department raising funds for the purchase of additional fire apparatus.

Livingston, Essex Co., N. J.—Plans for the proposed new fire station have been finished. Estimated cost $20,000.

Jersey Shore, Lycoming, Penn.—Site is being sought for erection of fire station. E. H. Beerweiler, Pres. Borough Council.

Gladwyne, Montgomery Co., Penn.—Reports state city planning to organize a new fire company in the near future.

Armada, Macomb Co., Mich.—It has been decided to purchase new piece of fire apparatus.

Upper Sandusky, Wyandot Co., Ohio.—Crane township to vote on purchase of fire engine, to be housed in Upper Sandusky.

Riegelsville, Bucks, Co., Penn.—Reports state plans are under way for purchase of new fire apparatus for town and vicinity.

Idaho Falls, Bonneville, Co., Idaho.—New fire station to be erected here, according to reports.

Lake Wawasee, Kosciusko Co., Ind.—Movement started for securing better fire protection here.

St. Paul, Ramsey Co., Minn.—City has voted an appropriation of $850,000 for new fire and police alarm system, and other improvements.

Teague, Freestone, Co., Tex.—Additional apparatus is to be purchased for fire department.

Breen Bay, Brown Co., Wis.—City to purchase a 1,000 gal. pumper, a hook and ladder truck and to enlarge the West Side fire station. A resolution was adopted by City Council appropriating $30,000 for this purpose. R. H. Drum, Chief of Fire Department.

Pittsburgh, Penn.—Work is to be started soon on the erection of three story combined fire and police station in East End, at cost of $220,000.

Mena, Polk Co., Ark.—City Council has authorized purchase of new motor truck chassis to be used for carrying equipment of fire department.

Des Moines, Polk Co., Iowa.—Plans are being made for the installation of a fire alarm system here.

Ocean City, Cape May Co., N. J.—City planning to purchase several pieces of fire apparatus in the near future. To include two 1,000 gal. pumpers. S. B. Conver, Chief of Fire Dept.

Brookville, Jefferson Co., Penn.—An ordinance was passed authorizing the purchase of land for the erection of fire station. Fred D. Sayer, Borough Secretary.

Norristown, Montgomery Co., Penn.—No. 1 Fire Company and the Good Will Fire Co. have started a campaign to secure new fire apparatus, according to reports.

New Rochelle, Westchester Co., N. Y.—City Council discussing plans for the securing of adequate fire protection for Clifford Island.

Willows Glen, Wilmar Co., Calif.—Council considering purchase of additional fire apparatus, according to reports.

Vista, San Diego Co., Calif.—Volunteer fire department was organized here with C. E. Lawrence as chief.

Reddick, Kankakee Co., Ill.—Village Board contemplating purchase of new fire equipment, according to reports.

Salesman Wanted

Experience in selling fire apparatus, high class product in eastern territory. Salary and commission. Address: Box 157, % FIRE ENGINEERING, 225 W. 34th St., New York City.

8-22, 9-5

For Sale
Fire Apparatus

4 cylinder, American LaFrance combination Hose Car and Chemical, 6 years old, in excellent condition. The reason for wanting to dispose of the above apparatus is because we are standardizing on Triple combination Pumpers and Hose Cars. Apply: Chief John C. Stahlhut, Fort Wayne, Indiana.

7-25, 8-8, 22.

Two Cities Place Large Apparatus Orders

Both New York and Boston have placed orders for large fleets of apparatus with the American-LaFrance and Foamite Corporation. New York City ordered fifteen 75-foot aerial trucks and six special 700-gallon pumpers. This is the largest order that New York has placed since 1925. At that time twenty-eight American-LaFrance units were purchased.

Boston ordered six 85-foot aerial trucks, one 750-gallon pumper and six triple combination cars. With this order, Boston will have 155 pieces of this company's make in service.

Chanting Stops Ache but Starts Fire

Attempts to cure a toothache by chanting were responsible for a fire on a construction job at Cavite, Philippine Islands.

A Filipino janitor and an Indian Sikh watchman were in charge of the place. The janitor had an aching tooth and the watchman tried to cure it by chanting.

The cure consisted of the janitor looking into the watchman's eyes steadily as the latter would light matches and return the gaze. The incantations started and the process lasted until an entire box of matches had been burnt. After the ceremonies, the two locked the builder's office and left. The match sticks that had been thrown on the floor set fire to papers and started the fire.

Fire School Conducted at Norwalk

A fire school is being conducted at Norwalk, Conn., under the supervision of Chief George W. Bogardus, by F. A. Murray who has trained firemen in many departments.

The course of study is so arranged that it will cover a period of ten days. Each day there are three hours of instruction. The first half of the lesson is devoted to drill and the later half to lectures. Firemen are trained at the department's drill tower in the use of scaling ladders, rescue work and the use of tools.

After Mr. Murray has completed the prescribed course, the men will be trained one hour each day until they become perfect in the principles that were taught during the school work.

Reading Considering Paid Department

A movement has started in Reading, Pa., to abolish the volunteer fire department that has been serving the city for so many years, and to establish a paid organization.

The mayor suggested that a vote be taken among the department members to determine if they were agreeable to the plan. The central body solved the problem by tabling it.

Another plan was suggested by the Superintendent of Public Safety. He suggested that a two-platoon system be started for drivers and that full-time assistant chiefs and drivers be placed on the city pay roll. Believing that this was a step toward a paid fire department, the volunteer firemen voted against it.

Subsequently they were granted the double shift and additional gratuities to meet the expense.

The matter of full-time assistant chiefs lay dormant for a time. Then the central body got busy on this, and after a hard fight, during which every unit took affirmative action, in addition to the union, it was put into effect. The question of placing them on the city pay roll did not figure, as the assistant chiefs, together with the chiefs, always have been city officials, but subject to certain authority of the Firemen's Union.

The volunteers realize that if it depended on their consent, and that they gave it, the translation from a gratuitous to a paid department would be a simple process in Reading, as the city owns all the fire houses with the exception of those of the Liberty and the Oakbrook, to which organizations rent is paid, and all the apparatus. The companies own much of the auxiliary equipment, including the hose and the furnishings. As to the cost of operation, they declare that unless there would be a material reduction in the number of companies, which they do not believe would be safe, but that there could be advantageous relocating in the case of some, it would be very much heavier, likely triple what it is today.

Sault Ste. Marie Selected for Convention

The 1929 convention of the Michigan State Firemen's Association will be held in Sault Ste. Marie, according to a vote taken at the annual gathering in Port Huron, Mich.

The new officers of the association are Fred D. Higgins, grand Rapids, president; Frank Metz, Allegan, first vice-president; Paul Lefke, Lansing, second vice-president; Archie McClellan, Port Huron, third vice-president; H. L. Williams, Ludington, re-elected secretary and Charles Lane, Charlotte, re-elected statistician.

Charles Livingston, state commissioner of insurance, spoke on "Over-insurance and its Bearing on Fire Prevention." He asked firemen to insist that insurance agents should not over-insure property. He predicted that courses in fire prevention would soon be instituted in the schools.

The convention ended with a banquet at the Hotel Harrington.

INDUSTRIAL PLANT PROTECTION

CARBON DIOXIDE EXTINGUISHERS SUITABLE FOR INDUSTRIAL WORK

Scheme Is Not New but Was Prevented in Developing by Clogging of Discharge Nozzle—Large Electrical Units May Be Protected*

FIRE needs oxygen. An inert gas can therefore be used to extinguish fire by depriving it of oxygen. If the oxygen content in air, normally twenty-one per cent, is reduced to twelve or fifteen per cent, flame dies out, and smoldering stops at eight per cent.

Carbon dioxide is especially suitable, because it is easily obtainable and relatively cheap. It does not damage the most delicate materials, and no added loss results, as when water or chemicals are used. It does not short-circuit electrical equipment and the stream does not conduct current. It has no effect upon insulating material, and leaves no residue which has to be cleaned away. Stored as a liquid in pressure containers, it keeps indefinitely and does not freeze.

Liquefied carbon dioxide in pressure containers was first suggested as an extinguisher about fifty years ago. Its use did not develop at first, simply because the gas could not be released quickly and completely. When the valve on an ordinary commercial cylinder is opened, the pressure is reduced, the liquid changes to gas, and the gas expands as it passes through the valve. Since expansion of any gas requires heat, the carbon dioxide becomes quickly chilled and soon solidifies, clogging the orifice and finally choking it completely.

The first big step was to overcome this clogging. It was done by extending a so-called siphon tube to the bottom of the cylinder. This tube is open at its lower end and at its upper end leads into a special quick-opening discharge valve. With this arrangement, the pressure forces the carbon dioxide as a liquid directly to the discharge orifice. There is no clogging because expansion and chilling occurs only beyond the orifice.

Permanent Piped Systems

After rapid uninterrupted discharge had been made possible, permanent piped systems of carbon dioxide were developed for the protection of ships at sea. Fires in closed cargo holds are difficult to fight by ordinary means; carbon dioxide is retained in such enclosed spaces, permeates throughout, reduces the oxygen, and smothers all fire. Experience has been favorable, and today hundreds of cargo and passenger vessels, oil tankers, and even pleasure yachts, are protected in this way.

Such permanent piped systems use a battery of commercial-size cylinders with the special discharge devices. The cylinders contain fifty pounds of carbon dioxide which at normal temperatures is under about 750 pounds pressure. Located outside, they are piped directly to discharge nozzles in the enclosure. The cylinder valves are operated either automatically or manually, by releasing weights which pull down each valve arm. This gives a quarter turn which opens the full pipe passage, allowing a battery of cylinders to be emptied in less than a minute. The liquid passes through the nozzles and then immediately gasifies and expands. Although this expansion chills the air, the extinguishing action is principally due to the reduction of the oxygen content.

* Abstract of article printed in Factory Mutual Record.

Any special industrial hazard, isolated in a separate small room of limited area, can be effectively protected in the same way that the holds of vessels are protected. Two such systems in industrial plants have operated satisfactorily in actual fires. One protects the linseed-oil room at the Armstrong Cork Company, Lancaster, Pennsylvania; the other, the dry-cleaning room at the Boston Dye House, Malden, Massachusetts. Both systems are controlled manually from outside, and the cylinders are mounted on scales, with the beam arranged to ring an electric alarm if loss of weight occurs through leakage.

In power houses, these systems are well suited for the protection of turbo-generators of the closed type, and for oil-switch rooms and transformer vaults. Protection for turbo-generators of the non-recirculating type requires tight automatic dampers in the air ducts to confine the carbon dioxide.

A number of turbo-generators can be protected by a single battery of cylinders, with pipes leading directly into the machine casings or ventilating ducts. The gas is discharged automatically by differential relays, which trip when an internal short circuit occurs. Automatic directional valves turn the gas into the proper machine. To prevent further arcing and to stop the generator, the relays also open the main and field switches and close the steam throttle. Additional cylinders then discharge automatically at intervals, to compensate for leakage of carbon dioxide during the half-hour or so before the machine, rotating by momentum, finally comes to rest. This is done to maintain the carbon dioxide concentration long enough to give any incandescent material time to cool and to prevent any smoldering fire from again breaking out.

A score or more of these power-house installations are in service or proposed. They are so recent that no real fire experience is yet available, but tests have been satisfactory. The desired concentration of 30 per cent is obtained ten seconds after tripping and is maintained until the machine stops. Thereafter 20 per cent is ample and is maintained for an hour or more.

Portable Extinguishers

Portable hand extinguishers were a logical development of the piped systems. The Bell Telephone Company of Pennsylvania did the pioneer work in their efforts to develop an extinguisher which, unlike water or chemicals, would not injure the delicate connections and small wires on telephone switchboards.

The hand extinguishers are smaller editions of the commercial-size cylinders. Two types essentially similar are on the market. Each has a drawn steel cylinder. Both hold about seven pounds of gas under 750 pounds pressure at normal temperatures. Each has a siphon tube, a quick opening valve, and a short hose leading to the nozzle orifice, which opens into a large cone or funnel for directing the stream.

In use, the extinguisher is carried in the hand or slung over the shoulder. Opening the valve sends the liquid through the hose. At the nozzle it is broken into spray, which gasifies and expands instantly. The heat taken for expansion chills some of the spray and converts it directly to solid "snow," which has a temperature of —110° F. A white stream of "snow" mixed with gas issues from the funnel with a loud hissing noise, reaches five or six feet, enlarges into a cloud, and soon dissipates

BADGES of Distinction

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New York City

Saves time - *and costly hose*

Complete Information of Prices on request

It's often necessary to move apparatus at a fire. Automobile traffic hates to be held up by a line of hose stretched across the right of way.

Why ruin your hose by driving over it? Or waste valuable time cutting off and disconnecting?

The Wausau Protector is a big time and money saver—easy to handle and carry. Order a set today, or write us for particulars.

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Are made of strong, heavy duck and lapped seams and are designed of such thickness and weight as to be light enough to be handled quickly and rigid enough for the most strenuous service. They are rubberized on both sides with a double coating of a high grade, long life, rubber compound.

CLIFTON SALVAGE COVERS are built to stand the heaviest abuse and are used by many of the large Protective Departments.

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For greatest efficiency.
For ease of handling.
Unsurpassed for solidarity and distance.

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LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

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LARKIN Shut-off Nozzles

Over 2000 Fire Departments have 15,000 Larkin Shut-off Nozzles in service. They have a successful record that is not exceeded by any article used in the fire service. Specify and insist upon them in buying new apparatus.

Write for catalog

The LARKIN Mfg. Co.
Dayton, Ohio

High Grade Fire Dept. Supplies of All Kinds

BI-LATERAL FIRE HOSE

THE BI-LATERAL FIRE HOSE CO.
230 West Randolph St., Chicago, Ill.

The principal reason for the failure of fire hose before the Bi-Lateral construction was invented and why it had to be purchased so frequently by municipalities is because it was necessary to carry it in a flattened position.

The Bi-Lateral hose is made to flatten. This is why Bi-Lateral fire hose is guaranteed for six years instead of three.

When coupled with rocker lug couplings it makes a superior fire fighting line.

like a large jet of steam. Some solid snow collects, but rapidly changes directly to gas without "melting."

This stream of gas pushes away the air and sets up locally a highly concentrated atmosphere of carbon dioxide. Thus suddenly deprived of oxygen, a small light fire quickly goes out, while a fire which has taken good hold is likely to reignite later from glowing embers. The chilling effect of the "snow" is short-lived and ordinarily plays only a minor part in extinguishment.

Giving Chief Power in Fire Prevention

(*Continued from page 724*)

notice should be delivered to the person responsible for the conditions found or his agent and a carbon copy kept by the inspector to be filed at headquarters and referred to during the process of checking up on the complaints. A sample of the notice is as follows:

BOSTON FIRE DEPARTMENT
FIRE PREVENTION DIVISION
60 Bristol Street

Notice served on Mr. *John Doe* this *7th* day of *May*, 1928, *J. Smith, Inspector.*

DISTRICT 7

Mail.....Personal Service....x.....

NOTICE TO ABATE A FIRE MENACE

Mr. *John Doe*

No. 14 *Jay St.*,

As owner or occupant of premises 14 *Jay St.*, you are hereby notified to remedy the conditions named below within 4 days of the service of this notice, Sundays and legal holidays excepted, or to show cause why you should not be required so to do, namely:—

Waste combustible material consisting of papers, excelsior, old mattress and broken furniture in cellar.

.....

.....

If at the expiration of time allowed these conditions have not been remedied and no cause aforesaid be shown, such further action will be take as the law requires.

By order of
(Signed) *Head of Fire Department.*

Good Effect of Notice

The leaving of this form of notice has a surprisingly good effect. A verbal request to remedy conditions frequently results in repeated requests, but almost invariably the printed form of notice bearing the name of the chief fire official results in a prompt compliance with the terms of the notice.

In the practice of inspecting buildings it is found best generally to start at the roof and proceed downward visiting every floor enroute to the basement. This, of course, applies for buildings used for mercantile and manufacturing purposes, etc. The manager, or other person in charge, should first be interviewed by the inspector who should politely make known his position or mission. If necessary some person familiar with the building should accompany the inspector provided this will not inconvenience the firm.

What the Inspector Should Familiarize Himself With

The inspector should familiarize himself with the exterior conditions of the buildings, such as the location of the nearest fire alarm box, the number of hydrants within a limited number of feet, the exposures to and from other buildings. He should be familiar with all laws and regulations and note whether or not they are being complied with relative to heating and lighting systems; means of ingress and egress; private fire protection such as automatic sprinklers and fire alarm systems, standpipes and hose connections, water and sand pails; the manner of keeping, storing, use and sale of flamable fluids and compounds, explosives, etc., the manner of storing stock, whether or not this is done in a manner conducive to interfering with the proper functioning of automatic sprinklers or the operation of the fire department in case of fire; the manner of disposing and keeping of waste combustible material, etc.

Inquiry should be made relative to the manner of evacuating the building in case of fire and the knowledge of the employees in the handling of fire appliances in times of emergency.

Firmness of Chief Will Invite Cooperation

Even in municipalities where there may be no laws or regulations governing these matters, in whole or in part, the fire chief, who courageously takes a firm step in the direction of remedying defective conditions, will be surprised at the cooperative spirit of the average business man, who, according to my experience, is eager to adopt any recommendation which tends to preserve his business intact.

As a result of my experience, both as an official in the fire fighting division of the department and in the fire prevention division, I am convinced that the proper way to successfully carry on fire prevention work is to organize a separate division in the department to be known as the fire prevention division whose members are to perform no other work except in case of emergency. A fireman whose duty it is to inspect buildings continuously will acquire more knowledge and do more effective work toward the prevention of fire than any other agency that may be adopted by a fire department.

Flue Gas May Prevent Dust Explosions

The use of inert gas, or flue gas, piped from the furnaces of manufacturing plants for use in preventing fires and resultant dust explosions in grinding equipment should be seriously considered wherever the hazard exists, according to engineers of the Bureau of Chemistry and Soils of the United States Department of Agriculture.

Of thirty explosions occurring in feed-grinding plants during a twenty-year period, eighteen originated in the grinding equipment where it was impossible to prevent the formation of dust clouds or to eliminate sources of ignition. Experimental work by the department engineers has shown that it is practicable to use inert gas for flooding the inclosures of the grinding equipment and diluting the oxygen content to such a point that fires or explosions can not take place. The results of the investigation are described in Technical Bulletin 74-T, "The Value of Inert Gas as a Preventive of Dust Explosions in Grinding Equipment," just issued by the department.

Although the investigations were conducted in feed-grinding equipment, the results suggest many other possible uses for inert gas as a fire preventive. A modern development of this fire-extinguishing principle is the storage of compressed inert gas in tanks with distributing pipes which lead to the most likely sources of fire and quick-acting valves to release the gas. Such equipment has been used on ships and also in factories. A portable extinguisher consisting of a small tank of carbon dioxide under pressure has recently been placed on the market.

Pumper Delivered to Butterfield, Minn.—A Waterous pumper has been delivered to Butterfield, Minn.

Toledo Airport to Have Department—The new transcontinental airport now being planned for Toledo, Ohio, will have its own fire department.This was decided upon at a meeting of the Chamber of Commerce board of directors.

Chief Boyle to be Presented with Trophy—Chief Roger Boyle of Jersey City, N. J., will be presented with the Gilbert E. Stecher Trophy for showing the greatest fire loss reduction of any city in Hudson County. Jersey City has cut their annual fire loss figures exactly fifty per cent over that of the year previous. The first year that the cup was offered, it was won by Bayonne.

Fire Alarm Signals
Water Meters
Compounding Valves
Stops
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Presses for Lining Service Pipe with Cement

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Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

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"The Rolls-Royce among Fire Hydrants"

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MORSE
FIRE BOAT EQUIPMENT
Invincible and Callahan Nozzles

Fire Department Supplies

are in use throughout the country and giving unsurpassed service.
Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.
You will find that it pays.
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If your apparatus is Maxim-built it will prove dependable and reliable at all times.

Complete information upon request.

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Always ready for instant use.

For Personal Safety use

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Smoke and Fume Respirators

Positive protection against smoke, fumes and gases.

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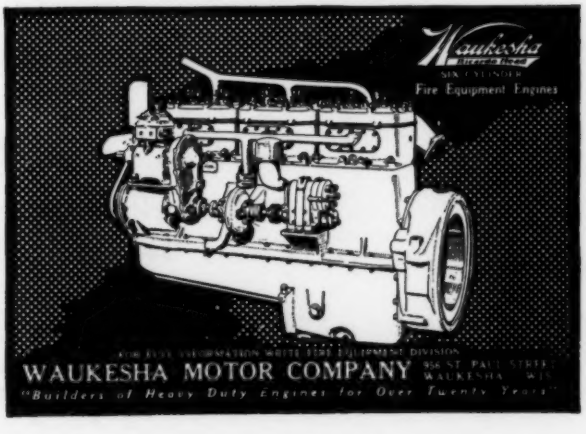
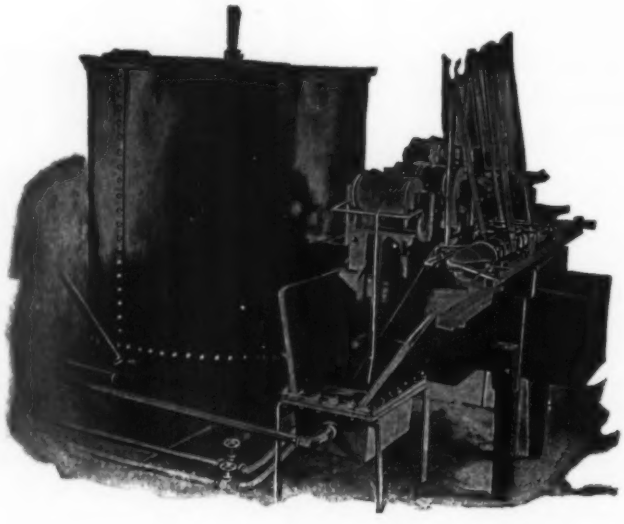




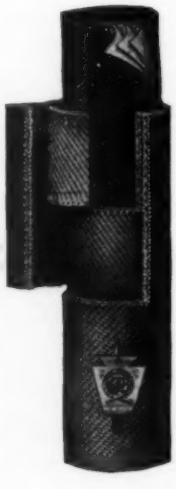
How is it Made?

FABRIC FIRE HOSE is so unusual in its construction that we have been asked again and again just how it is made. Those who have used it and have found its wonderful service qualities, far above the average hose, felt sure that we must have some special process of manufacture that makes Fabric Hose better.

And we have.

For instance, the machine illustrated above is for our patented process of treating the cotton strands with wax and Para gum, making Fabric Hose absolutely waterproof and impervious to mildew and rot.

Many other details of our process, besides this one, are illustrated and explained in a little booklet we shall be glad to mail you for the asking.—"Wax and Para Gum Treated Fire Hose.—How It Is Made." Address:



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Just run down the list of equipment and jot down on the coupon below the numbers that indicate the equipment in which you are interested. Then fill out rest of the coupon and mail it to us.

We will then request the leading manufacturers of such equipment to send you descriptive literature and prices direct without any cost to you or obligation whatever.

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For Information on Any Equipment Not Listed, Write on This Page or Use Separate Sheet.

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The Tire Supreme for Fire Fighting

Hold all World Records for Safety, Durability *and* Mileage

For Commercial Cars, Trucks *and* Buses

1 Ten plies of Gum-Dipped Cord.
2 Extra rubber between all plies.
3 Twin bead for greater durability and better tire seating.
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5 Heat resisting cushion stock of intermediate stiffness, interlocking cord breaker, two outer plies, tread and carcass.
6 Extra heavy, tough tread, uniformly distributed and tapered down to form sidewalls.
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Mr. V. E. Cargion, Chief at Auburn, Maine, writes "Two sets of Firestone Gum-Dipped Tires on our pumpers, have been in constant use for four years and we have had absolutely no tire trouble." Mr. Elmer L. Rhoades, Chief at Kearney, Nebraska, reports, "On the apparatus which we operate there are at present two Firestone Tires 8 years old, four 3 years old and two 6 years old."

A. J. Mortemer of McBrides, Mich., has to date received 51,000 miles from a set of Firestone Gum-Dipped Tires on his truck. For seventeen months these tires have been every day on a milk route, carrying two and three ton loads.

"Cannon Ball" Baker, in 1927, drove a 2-ton GMC truck, fully loaded, from Atlantic to the Pacific—3,693 miles in 137 hours and 36 minutes. This fastest and longest truck run on record was made on Firestone Gum-Dipped Heavy Duty Pneumatics.

The Black Diamond Bus Line, Brownsville, Texas, report a set of Firestone Gum-Dipped Tires on a 20-passenger bus, ran over 83,000 miles. The Parmelee Company of Chicago since 1924 have obtained the remarkable average of better than 35,000 miles from Firestone Gum-Dipped Tires on all vehicles in their passenger and baggage transfer fleets.

These records talk straight BUSINESS to the man who carries the responsibility for fire protection in his community.

PERFORMANCE—that's the thing!—not mere claims or promises. Tire buyers are entitled to the cold, hard facts, and Firestone Tires are delivering them in safety and mileage never before approached in the history of tire building.

Whatever your operating conditions, Firestone has built the tire to give the most economical and satisfactory service. The FACTS are before every tire buyer—the element of gamble has been eliminated. When you buy Firestone Tires, you KNOW that you are buying

MOST MILES PER DOLLAR

AMERICANS SHOULD PRODUCE THEIR OWN RUBBER... Harvey S. Firestone

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Patronize the Manufacturers You Find Listed Above

They are leaders in their respective lines and are in position to take the best possible care of your requirements.

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They are ready and anxious to serve you courteously in every way possible. Be sure to write them for complete information when considering new purchases — and place your orders with them.

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These two new books contain a mighty fine lot of up-to-the-minute information for every fire officer. Just glance through the list of topics covered as shown below — Then get your order in while the editions last.

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- Large hotels and rooming houses;
- Warehouses on waterfronts;
- Large area residential fires;
- Trains of gasoline tank cars;
- Combination stores and apartments;
- Large oil works;
- Motion picture film exchanges;
- Large refrigeration plants;
- Fiber and rag warehouses;
- Tall office buildings;
- Piano factories;
- Armory (during merchandise exhibitions);
- Large area celluloid merchandise factory;
- Seashore resort conflagrations;
- Large area "taxpayers;"
- Wholesale grocery stores and warehouses;
- Group-building fires;
- Theatres, schools, shoe and candy factories.

Inspection work: what it should cover, and how to supervise it.

Fire Hazards: a list of the more prominent hazards and how they may be corrected.

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Etc., etc., etc.

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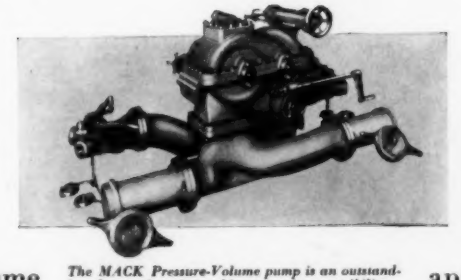
PROGRESSIVE FIRE ENGINEERING

Type 15—MACK 1000 Gallon Pressure-Volume Pumping Engine and Hose Car, delivered to the city of New Haven, Conn.

..... *produces a pump which takes full advantage of* Hydrant Pressure

Ability to operate from full capacity at 120 lbs. pressure, to one-half capacity at 250 lbs. pressure is achieved by MACK exclusive pressure-volume control without increasing the engine or the pump speed. The patented automatic pressure regulator is combined with the pump control throttle lever. It controls pressure from all discharge outlets. Hosemen will appreciate this safeguard against rapid increase in pressure when one or all of the pump discharge lines are shut off.



The MACK Pressure-Volume pump is an outstanding fire engineering achievement in accessibility—pressure-volume control—pressure regulation—simplicity, and freedom from wear.

For detailed information, write to

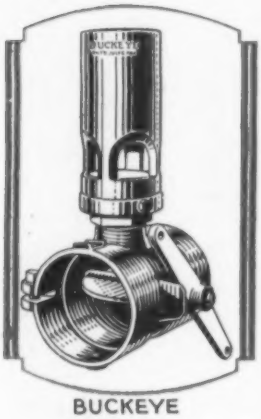
MACK-INTERNATIONAL MOTOR TRUCK CORPORATION

Fire Engine Division

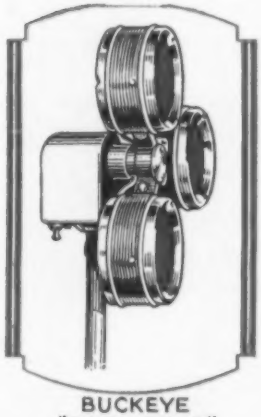
25 Broadway New York City

Direct MACK factory branches are operated in more than 100 cities in the United States and Canada. Think what this means to you in case of accidents.

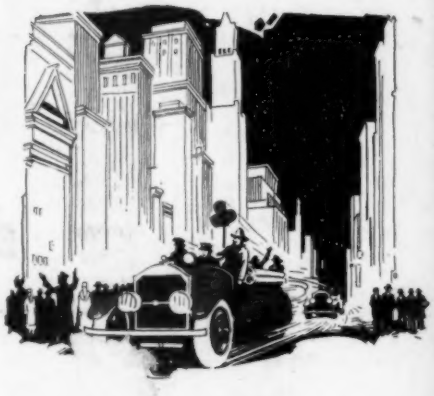
They can *HEAR* you and *SEE* you coming!



BUCKEYE WHISTLE



BUCKEYE "ROTO-RAYS"



THE Powerful Buckeye exhaust whistle is now standard in *more than Five Hundred* of America's leading Fire Departments.

It stands supreme in the warning signal field because it is the *only* emergency signal that has successfully met today's requirements.

In progressive cities where safety and efficiency are important factors you hear Buckeye Whistles. There is a reason. Ask the Chief why.

BUCKEYE ROTO-RAYS, the three revolving red signal lights, which instantly identifies the Fire Department after dark, is an ideal companion for any type of warning signal as it performs an extremely necessary service.

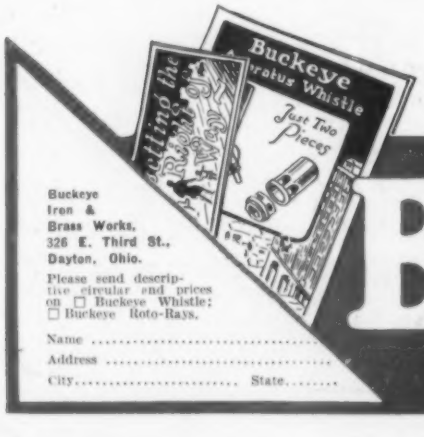
Its usefulness is quite apparent to alert fire department officials, for the movement of the lights is a distinctive feature possessed by no other signal, and which entirely eliminates the possibility of "Roto-Rays" becoming confused with any other type of signal or illuminated object.

Many have been quick to recognize the *additional protection* which "Roto-Rays" affords their citizens, their firemen and their investment in expensive pieces of apparatus.

Safety is cheap at any price, and in Buckeye Whistles and "Roto-Rays" we are offering the *finest and most effective combination of warning signals in existence* at reasonable prices.

Buckeye Iron & Brass Works
326 East Third Street, Dayton, Ohio

It Pays to Use Warning Signals That Warn



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